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## Domestic travel constraints and constraint negotiation strategies for pet owners in Hsinchu city

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### ABSTRACT

This research investigated domestic travel constraints and constraint negotiation strategies for pet owners. A questionnaire survey was used to collect data from pet owners interested in traveling with pets. The results showed that more than 90% of the respondents wanted to travel with pets in the future. The top three travel constraints of traveling with pets, as listed in the survey, were: public transportation is not convenient enough, without enough pet-related and facilities at the destination, and travel businessmen will not welcome to bring pets. Significant differences in travel constraints existed, according to the respondents' and their occupations. When respondents encountered constraints, most of them would adopt multiple strategies to deal with the constraints and would adopt behavioral negotiation strategies to achieve participation.

### KEYWORDS

Traveling with pets; Travel constraints; Constraint negotiation strategies.



## INTRODUCTION

The changes of time and the transformation of social patterns have produced the phenomena of a declining birthrate, the extension of life expectancy owing to progress in medical technologies, and the coming of an aging society. Under such a social trend, the role and status of pets has also changed. The functional roles in the early hunting period, such as looking after the house and protection, have been transformed to a pet as a family member that is loved and cherished. The society has created a new phrase, “fur kid,” suggesting that pets are kids with fur.

In terms of tourism, some pet owners have started to take their pets with them during tourism activities. When engaging in tourism activities, the general public significantly prefers to take their pets along to go travelling, and is unwilling to leave their pets in the care of pet hotels. Yu (2006) found that most pet owners will take their pets with them one to five times annually (47.7%), when travelling for more than two days, and advised B&B operators to perceive that pet tourism has become a future trend. If relevant services can be provided, it is believed that the competitiveness of B&B can be enhanced. Su-fen Chuang, the manager of Pet Tour, suggested that the market for pet tourism in Taiwan is still small. However, under the trend of a declining birthrate, it is believed that the future market has great potential (Hsu, 2008). The Easy Agritourism program established by the Council of Agriculture of the Executive Yuan has developed various tourism themes, and one of them is pet tourism. In addition, they have also integrated the information on many legal leisure farms and B&Bs providing pet tourism and accommodation (Easy Agritourism, 2011). Obviously, among various pet-related business opportunities, pets have affected pet owners’ leisure activities. Therefore, tourism-related operators should assess this market.

However, the trend of pet tourism has not been fully accepted in Taiwan, and there are many restrictions. For example, many operators still post the warning message “No pets allowed” in front of their stores, with the only exception being that for guide dogs. As a result, during tourism activities, pet owners will encounter much inconvenience, and thus have unhappy tourism experiences. When pet owners intend to bring their pets to tourism activities, they still will face many problems.

Studies concerning leisure constraints have been initiated since the 1980s and have been broadly conducted by scholars. Studies concerning leisure constraints in Taiwan were initiated in 2000, and an increasing number of studies have been conducted. However, there has not been any study investigating pet owners. Jackson, Crawford, and Godbey (1993) indicated that studies concerning leisure constraints regard constraints as problems that cannot be overcome, and thus result in non-participation in leisure activities. Their study proposed an alternative perspective, and suggested that the negotiation process can moderately adjust the method for participation and reduce the influence of constraints, resulting in both participation and non-participation.

According to the research background and motivations mentioned above, the research purposes of this study were as follows:

- (1) To investigate owners’ experiences of engaging in tourism in Taiwan with their pets and their willingness to participate in future tourism activities.
- (2) To investigate the leisure constraints for pet owners to engage in tourism with pets in Taiwan.
- (3) To analyze the difference in travel constraints for pet owners of different socioeconomic backgrounds.
- (4) To understand the constraint negotiation strategies adopted by pet owners when facing different constraints during tourism activities with pets in Taiwan.

The main purpose of this study was to investigate the constraints encountered by pet owners as they engage in tourism activities with pets in Taiwan. The research scope included Hsinchu City, and the investigation included veterinary hospitals, pet stores, and sports parks. The subjects were the residents of Hsinchu City who kept pets (dogs) and were interested in engaging in tourism activities with their pets. A questionnaire survey was conducted, and statistical methods were used to analyze the data. The data of the qualitative open-ended questions were arranged, and suggestions were proposed according to the research results as a reference for tourism operators to plan the market for pet tourism.

## LITERATURE REVIEW

### Pet tourism

#### (a) The meaning of pets

There are various definitions of pets. In Taiwan, the Animal Protection Act defines pets as “dogs, cats and other animals that are raised or kept for the purpose of pleasure and companionship.” Western society has also created a new phrase for pets, “fur kid,” and its synonyms “fur baby” and “fur child.” Such a phrase refers to a pet treated like a child by a pet owner (Huang, 2005; Word Spy, 2004).

In the early days, dogs mainly acted as watchdogs around human beings or provided other assistance. Yu (2006) indicated that with the change of the times, people started to regard pets as their own children. When pet owners dine out or go travelling, they will leave their pets in the care of pet hotels. However, pet owners’ needs can no longer be fully met. In the U.S., more and more people are taking their pets with them when traveling. The founder of TripswithPets.com, Kim Salerno, suggested that from hotels to airline companies, the entire tourism industry has to open its doors for these four-legged guests. People’s opinions on pets are different from those in the past. Pets really are considered part of the family and when they go on trips, people don’t want to leave their family members behind (Ford, 2007). Consequently, pet tourism has been gradually developed.

### **Studies concerning pet-tourism**

Pet tourism is at its rise globally. In recent years, there have been a number of studies concerning pet tourism in Taiwan. For example, Chen (2005) conducted eight on-site observations on the social sites of pet owners, in a study on pet keeping and social behavior, and used semi-structured questionnaires to conduct in-depth interviews with 14 pet owners. After the data were analyzed and interpreted, a total of ten items were developed. The study mentioned that, “among the future pet-keeping-related consuming behaviors, more products and services mainly for establishing, maintaining, and operating human-pet relationships will appear,” and “among the future pet-keeping-related consuming behaviors, more open social activities will appear,” suggesting that pet owners will regard their pets as friends or family, and many human ceremonies will be applied to pets. Moreover, many pet owners will take their pets to public places to interact with other people, and more and more places will become open to pets.

Fang and Chang (2006), in a study on pet hotels in Taiwan, indicated that the general public prefers to travel with their pets when engaging in tourism activities and is unwilling to leave pets in the care of pet hotels. Yu (2006) investigated the practicability of developing B&Bs where pets are allowed in Taiwan, and found that among pet owners, 75.8% of them regarded pets as their family, and most of them (47.7%) would travel with their pets one to five times annually, for trips lasting more than two days. Lee (2007) investigated the hotels providing pet services in Kenting, and conducted in-depth interviews with hotel workers. The study found that the pet market has gradually been expanded. If specific pet-related services can be promoted, the customers' needs can be met, and the business income and occupancy rate can be increased. Moreover, all of the subjects agreed that the trend of travelling with pets will become more and more popular. However, the study results of Carr and Cohn (2009) shows that, although there is a strong desire among dog owners to take holiday with their pets, actualization of this desire is comparatively low.

### **Leisure constraints**

#### **(a) Concept and definition of leisure constraints**

The first concept of constraints was proposed by Lewin in 1951, who used the socio-psychological perspective to indicate that the behaviors of individuals are inhibited by various internal and external powers (Crawford and Godbey 1987). Study on leisure constraints was initiated in the 1960s. The U.S. ORRRC (Outdoor Recreation Resources Review Commission) conducted a nationwide survey on outdoor recreation activities in order to find out the external constraint factors. The research topics became more and more complicated. Scholars agreed that there are various types of constraint factors existing in leisure activities (Mannell and Kleiber, 1997).

Yang (1989) both narrowly and broadly defined travel constraints as: (1) in a narrow sense, “when people intend to participate in an activity, they are affected by one or more factors and thus cannot continuously participate in this activity”; and (2) in a broad sense, “all the constraints experienced from the perception of tourism to participate or non-participate in the activity”. Yin (2006) defined travel constraints as “any factor that can stop or restrict individuals' regular or long-term participation in tourism activities or reduce individuals' desire to participate and participation quality.” Chen and Lin (2006) defined constraint factors as “any factor that can stop or restrict individuals' participation in tourism activities or reduce individuals' desire to participate in them.” In conclusion, as Jun and Kyle (2011) proposed, constraints can be defined as factors that affect people's leisure preferences, limit participation, or reduce the level of enjoyment and satisfaction.

#### **(b) Studies concerning tourism activities and leisure constraints**

Scholars have applied the concept of leisure constraints to tourism activities to investigate the issues concerning travel constraints. Some studies have focused on the analysis of travel constraints under different types of tourism patterns. For example, Yang (1989) investigated the travel constraints for residents of Taipei City/County, and found that the top three travel constraints were: restrictions on work (school work) responsibility, expected traffic congestion, and restrictions on climate. Pennington-Gray and Kerstetter (2002) applied the constraint model to nature tourism, and found that the top three travel constraints were: a lack of spare time, a lack of travel companions, and a failure to find travel companions. Yin (2006) investigated Tainan City residents' travel constraints for a two-day trip in Taiwan, and found that the top three constraints were: safety concerns over the tourism process or location, poor devices and facilities at tourist spots and overcrowding, and poor traffic conditions on the route to the tourist spot. Scott and Mowen (2010) examined park and recreation non-users might respond to agency strategies that seek to mitigate the severity of constraints and facilitate more frequent use of parks. Using data from a telephone survey of residents in Northeast Ohio, this study found that individuals most likely to respond that they were transportation constrained.

Some scholars have investigated the travel constraints for specific populations. Chen (2002) investigated the tourist behavior of Christians in Taiwan, and analyzed the travel constraints for religious tourists in Jerusalem. For tourists who had never been to Jerusalem, the top three constraints were a lack of time, excessively high travel costs, and war factors. Wu (2005) investigated the constraint factors for the elderly to participate in overseas tourism, and the average scores of being worried about the safety of the leisure environment, being worried about medical inconvenience, and being worried about language barriers were the highest among all the constraints. Tsai (2006) investigated Penghu residents' travel motivation, travel constraints, and travel behavior, and found that the averages scores of three items, being busy at work and having a lack of time, a heavy family burden, and being worried about the weather, were the highest. Chen and Lin (2006) investigated the influence of travel motivation and travel constraints on career soldiers' intention to participate in overseas tourism. A

questionnaire survey was conducted on career soldiers, and the scores of three items, “being worried about the conflict between the travel schedule and army tasks”, “being worried about criticism from supervisors”, and “duty for shift-work” were the highest. Koca et al. (2009) studied the leisure-time physical activity of Turkish women. These women experienced several constraints such as family responsibilities, ethic of care, time, social approval and economics. The study also revealed nuances of these constraints reflecting the tension between the traditional and contemporary Turkish society and related to perceptions surrounding cultural and religious ideologies.

### **(c) Constraint negotiation**

In addition to the investigation on constraints, investigation on leisure constraint negotiation strategies is another research issue. The preliminary investigation on studies concerning constraint negotiation and constraint negotiation strategies was conducted as follows.

#### **(aa) Concept and definition of constraint negotiation**

Early studies suggested that constraints would restrict the participation in leisure activities, namely, as individuals encounter constraints, they eventually will not participate in activities. Crawford et al. (1991) proposed an opposite perspective, and suggested that the constraint factors of leisure participation can be adjusted through negotiation to make more appropriate arrangements. Jackson et al. (1993) summarized relevant literature and formally proposed the perspective of constraint negotiation. They suggested that the existence of leisure constraints may not necessarily lead to the non-participation in leisure activities, and the participation in leisure activities may be adjusted through individuals' negotiation. In addition, they divided negotiation strategies into two types, behavioral strategies and cognitive strategies. Such negotiation may modify participation rather than foreclosing it. Yu (2006) combined constraint negotiation strategies with travel behavior, and defined travel constraint negotiation strategies as “the coping method adopted by individuals when facing travel constraints, in order to achieve the purpose of tourism participation.”

#### **(bb) Studies concerning constraint negotiation strategies**

Several scholars had already conducted relevant studies. Scott (1991) conducted a qualitative study to investigate the constraints on people playing bridge. Scott suggested that leisure participation is dependent not on the absence of constraints but on negotiation through them, and proposed three strategies for reducing or coordinating constraints, including obtaining game-related information, adjusting game rules, and developing skills to participate in games of a higher level. Frederick & Shaw (1995) investigated the constraints for women undergraduate students in aerobic exercise classes, and found that body image concerns were shown to constrain the enjoyment of aerobics as a leisure activity, and this reducing of enjoyment was related to the clothing worn for aerobics and to competition over appearance and body weight among participants. However, in some instances, participants found ways to negotiate around the constraints to enjoyment, thereby finding ways to reduce the emphasis on body concerns and to increase enjoyment. Henderson et al. (1995) investigated the constraints for females with disabilities, and the in-depth interviews found that they could fight against the gender role expectation through negotiation strategies and successfully participate in leisure activities. James (2000) used semi-structured questionnaires and focus-group interviews to investigate the constraints and negotiation strategies of female high school students using public swimming pools. The study found that students would use some strategies to reduce self-consciousness, including covering up their bodies, staying in groups, swimming at remote venues and avoiding pools altogether. Hsieh (2001) selected married career women and full-time housewives as the subjects to investigate the constraints on time and money for them to participate in leisure activities, as well as the negotiation strategies they may use when encountering these two constraints. The results showed that, in terms of the constraint on time, they would use the negotiation strategies of decreasing the time spent on working or housework. In terms of financial constraints, they mainly reduced the frequency of participation. Livengood and Stodolska (2004) investigated the influence of the September 11 attacks on U.S. Muslims' travel behavior and their constraint negotiation. They used semi-structured questionnaires to conduct interviews, and the results showed that most Muslims would use negotiation strategies such as being more cautious, participating in group actions, reducing the frequency of travel, or amending travel patterns. Palen et al. (2010) identified leisure constraints, constraints negotiation strategies, and their relative frequencies among 114 high school students from under resourced area of South Africa. Through focus group discussions, participants identified intrapersonal, interpersonal, structural, and sociocultural constraints to leisure. Intrapersonal constraints were mentioned most often.

Some studies have divided constraint negotiation strategies into the behavioral aspect and the cognitive aspect for analysis. For example, Jackson and Rucks (1995) investigated leisure constraints and leisure constraint negotiation strategies, using open-ended questionnaires to ask students about the constraints they faced and their negotiation strategies. Behavioral strategies including: changing the use of time, acquiring more skills, and changing interpersonal relation, etc. Cognitive negotiation strategies including: accepting the incompleteness and doing their best, being more self-confident, and stopping thinking about the event, etc. The findings showed that most of the students would choose to use behavioral negotiation strategies to achieve their purpose. Yin (2006) selected residents in Tainan City as the subjects to investigate the correlation between travel constraints and constraint negotiation strategies of two-day trips in Taiwan. The results showed that residents in Tainan City mainly choose to adopt behavioral negotiation strategies, and they might adopt the same constraint negotiation strategy for different constraints as well. Moreover, hierarchical negotiation strategies or dual strategies might also be developed. Kleiber and Nimord (2009) conducted an interview survey to gather from a purposive sample of retirees to

identify constraints. Results indicated a variety of emotional and behavioral responses to constraints suggesting five prominent behavioral themes and three emotional themes. Behavioral responses were grouped into: reducing and eliminating, persistence with commitment, constraint as 'project', substitution, and exploration and self-discovery. Emotional reactions range from the initial frustration to acceptance and even gratitude for the possibilities that remain.

### **(cc) Summary**

Many studies have revealed that the relationship between pets and pet owners varies with time and social structure, and it has become more and more close. Pet owners regard pets as their family members, and when the whole family goes traveling, they hope to take their pets along with them. However, in Taiwan, the idea of traveling with pets is not generally accepted. If pet owners fail to carefully select tourist spots where pets are allowed in their schedule, they may face the embarrassment and unpleasantness of pets not being allowed.

The above studies concerning travel constraints have revealed that the constraint of time might significantly affect the subjects. However, constraints might vary with the types of subjects and regions, and the constraints encountered by them might also be different. Moreover, studies on travel constraints have usually focused on specific subjects, but relevant studies on pet owners have not been conducted.

Studies concerning constraint negotiation were initiated from the early period of the 1990s. There were diversified research themes, and different specific subjects were selected to conduct studies. The research results showed that constraints may not necessarily impede or reduce leisure participation, and most people will come up with ideas to overcome constraints and achieve their purpose of participation. Few people will choose to give up negotiations. Moreover, some studies have divided strategies into the behavioral aspect and cognitive aspect. According to the verification, most people will choose behavioral negotiation strategies more frequently than cognitive ones.

## **RESEARCH METHOD**

Based on the research purpose and the results of the literature review, in order to understand the socioeconomic background, travel constraints, and constraint negotiation strategies of pet owners, this study conducted a questionnaire survey in Hsinchu City, and conducted both quantitative and qualitative analyses.

### **Operational definitions of research variables**

The explanations about the operational definitions of the variables investigated in this study were given as follows.

Pet tourism: pet owners take their pets along when engaging in tourism activities.

Travel constraints: various factors that will stop or restrict pet owners from actually participating in pet tourism activities.

Constraint negotiation strategies: the methods adopted by individuals when they face travel constraints and intend to solve or overcome them.

### **Questionnaire design**

The questionnaire included three major parts: 1) individual socioeconomic background, 2) experiences of taking pets along to engage in tourism in Taiwan, and the intention to participate in future tourism activities, 3) travel constraints and constraint negotiation strategies. The scale of travel constraints was developed according to the studies conducted by Pennington-Gary & Kerstetter (2002), Wu (2005), and Yin (2006). A total of 16 travel constraints were developed and were properly adjusted according to the research theme. Moreover, after people who were highly interested in traveling with pets were interviewed, additional four travel constraints were included. Eventually, a questionnaire including open-ended questions on 20 travel constraints was developed (see Table 3 for travel constraints). A Likert 5-point scale was used for measurement, and the scores ranged from 1 to 5 points (denoting strongly disagree to strongly agree). Open-ended questionnaires were used to collect the subjects' constraint negotiation strategies. The subjects were asked if they had tried to overcome certain constraints when encountering them, and the subjects were requested to write down their methods for overcoming these constraints.

### **Sampling and data analysis methods**

A pre-test was conducted at DaJia Riverside Park in Taipei and at Hsinchu City Glass Museum, and the pre-test questionnaire was amended to the formal one according to the pre-test results. The formal questionnaire was then used to conduct the questionnaire survey. Random sampling method was used in this study, and the questionnaires were distributed from February 23 to March 23, 2008. The subjects were Hsinchu City residents who were interested in travelling with their pets, and this study used purposive sampling to select subjects. The research scope included Hsinchu City, and the investigation sites included veterinary hospitals, pet stores and sports parks. A total of 278 effective questionnaires were returned. After the questionnaires were returned, the reliability analysis on the scale of travel constraints was conducted, and Cronbach's  $\alpha$  was .834.

## **EMPIRICAL RESULTS AND ANALYSIS**

**Analysis on pet owners’ experiences of traveling with pets in Taiwan and their intention to participate in future tourism activities**

The questionnaire included a total of five items concerning tourism experiences in Taiwan and the intention to participate in future tourism activities (see Table 1). Among them, most of the subjects (176 subjects; 63.3%) had travelled with their pets. In terms of the amount of money spent on the latest tourism activity with a pet, 53 subjects (30.1%) spent NTD100 or less, and 51 subjects (29.0%) spent NTD101~4000. In terms of the number of days of the latest tourism activity with a pet, most of the subjects (67 subjects; 38%) travelled for one day or less. In terms of the amount of money that the subjects were willing to spend on their pets during future tourism activities, most of the subjects (110; 39.6%) planned to spend NTD101~400. As for the intention to take pets along during future tourism activities, a total of 100 subjects were strongly willing, and 92 subjects were willing. The total proportion of these two subjects was 69.1%, which was more than half of the total. Only nine subjects were completely unwilling (3.2%), suggesting that most of the subjects were willing to take their pets along during tourism activities.

**Table 1 : Analysis on tourism experiences in Taiwan and intention to participate in future tourism activities**

Tourism experiences in Taiwan and intention to participate in the future tourism activities		Items	Frequency	Effective percentage (%)
Have you ever taken your pet along during tourism activities?	Yes		176	63.3
	No		102	36.7
The amount of money spent on the pet in the latest tourism activity with a pet	NTD 100 or less		53	30.1
	NTD 101~400		51	29.0
	NTD 401~700		42	23.9
	NTD 701~1,000		18	10.2
	NTD 1,001~1,300		4	2.3
	NTD 1,301 or above		8	4.5
Tourism experiences in Taiwan and intention to participate in the future tourism activities		Items	Frequency	Effective percentage (%)
The number of days of the latest tourism activity with a pet	One day or less		67	38.1
	Two-day trip		53	30.0
	Three-day trip		56	31.8
The amount of money you are willing to spend on a pet in future tourism activities	NTD 100 or less		12	4.3
	NTD 101~400		110	39.6
	NTD 401~700		62	22.3
	NTD 701~1,000		41	14.7
	NTD 1,001~1,300		16	5.8
	NTD 1,301 or above		35	12.6
Intention to take a pet along in future tourism activities	Unwilling		2	0.7
	Completely unwilling		9	3.2
	Somehow unwilling		26	9.4
	Neutral		51	18.3
	Very willing		92	33.1
	Strongly willing		100	36.0

**Analysis on travel constraints**

**(a) Preliminary analysis**

The scale of travel constraints included 20 items, and its purpose was to measure the constraints perceived by pet owners in Hsinchu City when traveling with pets. Higher scores represented the stronger constraints perceived by the subjects. Among 20 travel constraints, the constraints with the highest means were: “public transportation is not convenient enough for taking pets along to the tourist destination” (M=4.34), followed by “the pet-related devices and facilities at the tourist spots are poor” (M=3.97), and “I worry that taking my pet with me will not be welcomed by tourism operators.” (M=3.94). The constraints with the lowest means were “I do not have friends to keep me company when taking a pet along during tourism activities” (M=2.34), “I do not have sufficient money to bear the expenses of a pet when traveling” (M=2.31), and “I am not sufficiently interested in taking my pet along during in tourism activities” (M=1.87). Table 2 lists the order of the constraints.

The results were different from other studies concerning travel constraints. The constraint with the highest score in past studies was the time factor. However, in this study, the time factor was in 15th place ( $M=2.52$ ), somewhere between “agree” and “neutral”. This study investigated taking pets along during tourism activities, and thus pet-related constraints were significantly stronger than pet owners’ individual constraints.

**Table 2 : Order of travel constraint items**

Travel Constraint Items	Number	Mean <sup>a</sup>	SD	Order
Public transportation is not convenient enough to take my pet along to the tourist destination.	278	4.34	0.85	1
The pet-related devices and facilities at the tourist spot are poor.	276	3.97	0.87	
I worry that taking my pet along engage will not be welcomed by the operators.	277	3.94	1.02	3
I suggest that there is a lack of pet-related tourism information.	278	3.92	1.02	4
I worry that taking my pet along during tourism activities may involve safety concern about the tourism process or location.	277	3.74	0.96	5
I worry that the weather conditions of the tourist spot are not good and thus I cannot take my pet along.	278	3.64	0.97	6
I worry that my pet’s health condition is poor or it is too old to participate in tourism activities with me.	278	3.18	1.21	7
I worry that the tourism location is too far and thus affects the emotion of my pet.	277	3.17	1.19	8
I worry that my pet cannot adapt to the new environment after leaving home.	278	3.11	1.18	9
I worry that I will feel dissatisfied with the tourism schedule if I take my pet along during tourism activities.	277	3.07	1.06	10
I worry that the emotion of my pet cannot be well controlled.	277	2.91	1.17	11
Owing to my work (schoolwork) responsibility, I do not have any opportunity to take my pet along during tourism activities..	276	2.88	1.11	12
I do not have my own transportation to take my pet along, and thus feel perplexed.	278	2.79	1.41	13
I have had bad experiences of taking my pet along during tourism activities.	176	2.73	1.10	14
I do not have enough time to take my pet along during tourism activities..	278	2.52	1.09	15
Owing to a heavy family burden, I do not have any opportunity to take my pet along during tourism activities.	274	2.45	1.03	16
My families do not encourage me or agree with me to take my pet along during tourism activities.	278	2.36	1.12	17
I do not have friends to keep me company when taking my pet along during tourism activities.	277	2.34	1.08	18
I do not have sufficient money to bear the expenses of taking my pet along during tourism activities..	278	2.31	0.93	19
I am not sufficiently interested in taking my pet along during tourism activities.	278	1.87	0.91	20

<sup>a</sup> Measurement scale: 1.Strongly disagree, 2.Disagree, 3.Neutral, 4. Agree, 5. Strongly agree

### (b) Factor analysis on travel constraints

The KMO value of this study was .820. The  $\chi^2$  value of Barlett’s test of sphericity was 1486.294 and was significant, suggesting that there were common factors existing among various items of the scale. Therefore, factor analysis could be applied to this study. Principle component analysis and orthogonal rotation of varimax were used to extract the factors. The extracted eigenvalue was larger than 1. Four factors were extracted from the travel constraint items, including the pet emotion factor, the support factor, the pet owner factor, and the responsibility and pet health factor. The overall cumulative variance was 52.667%, and the overall Cronbach’s  $\alpha$  was 0.8343 (see Table 3 for factor analysis on travel constraints). The result of factoranalysis was used to conduct more analyses in this study.

### Analysis on the travel constraints perceived by demographic differences of pet owners

This analysis used the t-test and one-way ANOVA to test the difference in the travel constraints perceived by demographic differences of pet owners (see Table4). In terms of the constraint factor of pet emotion, the pet owners whose average monthly income was NTD30,000 or less perceived significantly stronger constraint as opposed to those whose average monthly income was NTD30,000 and above. In terms of the constraint factor of support, age, average monthly income, and occupations had significant effects on the perception. Pet owners aged 18-25 perceived significantly stronger constraints as opposed to those aged 26 and above. Pet owners whose average monthly income was NTD30,000 or less perceived significantly stronger constraints as opposed to those whose average monthly income was NTD30,000 and above. Pet owners whose occupation was student perceived significantly stronger constraints as opposed to those whose served in industry, commerce, military, and government. In terms of the constraint factors of pet owners, the constraints perceived by

male pet owners were significantly stronger as opposed to those perceived by female pet owners. In terms of the constraint factor of responsibility and pet health, the difference in the socioeconomic backgrounds of pet owners did not significantly affect how they perceived the constraints.

**Table 3 : Factor loading of the factor analysis on travel constraints**

Name of factor	Items	Extracted factors and their factor loading				Cronbach's $\alpha$	Eigen value	Variance explained %
		Factor 1	Factor 2	Factor 3	Factor 4			
Pet emotion factor	I worry that my pet cannot adapt to the new environment after leaving home.	0.787	0.020	0.132	0.172	0.792	2.966	15.613
	I worry that the emotion of my pet cannot be well controlled.	0.783	0.063	0.127	0.083			
	I worry that the tourism location is too far and thus affects the emotion of my pet.	0.720	0.193	0.145	0.134			
	I worry that I will feel dissatisfied with the tourism schedule if I take my pet along during tourism activities.	0.626	0.192	0.235	0.096			
Support factor	I suggest that public transportation tools are not convenient enough to take my pet along to reach the tourist destination.	-0.008	0.703	0.033	-0.078	0.74	2.634	13.863
	I suggest that there is a lack of pet-related tourism information.	0.096	0.701	0.004	-0.016			
	I suggest that the pet-related devices and facilities at the tourist spot are poor.	-0.126	0.604	-0.116	0.387			
	I worry that taking my pet along during tourism activities is unwelcome to operators.	0.267	0.592	0.132	-0.095			
	I worry that the weather conditions of the tourist spot are not good and thus I cannot take my pet along during tourism activities.	0.364	0.555	-0.082	0.255			
	I worry that taking my pet along during tourism activities may involve safety concerns over the tourism process or location.	0.435	0.539	-0.054	0.225			
	I do not have my own transportation to take my pet along during tourism activities and thus feel perplexed.	0.219	0.321	0.292	0.273			
Pet owner factor	I do not have friends to keep me company when taking my pet along during tourism activities.	0.056	-0.001	0.759	-0.046	0.71	2.453	12.912
	I do not have enough time to take my pet along during tourism activities.	0.085	-0.041	0.685	0.145			
	I do not have sufficient money to bear the expenses of taking my pet along during tourism activities.	0.167	0.218	0.628	0.230			
	I am not sufficiently interested in taking my pet along during tourism activities.	0.249	-0.193	0.622	0.057			
	My family does not encourage me or agree with me taking my pet along during tourism activities.	0.025	0.103	0.507	0.384			
Responsibility and pet health factor	Owing to my work (schoolwork) responsibility, I do not have any opportunity to take my pet along during tourism activities.	0.117	0.073	0.270	0.754	0.636	1.953	10.28
	Owing to a heavy family burden, I do not have any opportunity to take my pet along during tourism activities.	0.265	-0.145	0.244	0.690			
	I worry that my pet's health condition is poor or it is too old to participate in tourism activities with me.	0.416	0.176	-0.011	0.512			

Overall cumulative variance explained was 52.667%, and overall Cronbach's  $\alpha$  was 0.8343; KMO=0.820,  $P \leq 0.05$

**Analysis on travel constraint negotiation strategies**

This study further analyzed the negotiation strategies adopted by pet owners when they encountered travel constraints. According to the interviews, a total of 96 constraint negotiation strategies were obtained. This analysis divided, summarized and integrated all the constraint negotiation strategies. The process included two procedures. First, the negotiation strategies with different wordings but the same meaning were put into the same category. Similar negotiation strategies were then further integrated and named (see Table 5 for the analysis on constraint negotiation strategies).

The results showed that most of the subjects (72 in total) completed their negotiation strategies for the constraint 7. I worry that taking my pet along during tourism activities is unwelcome to operators'. After summarizing the strategies used by the subjects, a total of seven strategies were obtained, including asking the operators and communicating with them (24 subjects), using money to solve problems (7 subjects), looking for information in advance and screening out the tourist spots where pet are allowed (12 subjects), reducing contact with operators (7 subjects), smuggling the pet (5 subjects), changing



stores for consumption or additionally arranging schedules (12), and others, including using pet strollers, training the dog, and preventing operators from feeling unpleasant (5 subjects in total).

**Table 4 : Analysis on the difference in perception of travel constraints by demographic differences of pet owners**

Name of variable	Categories	Number of pet owners	Average score of travel constraint aspects			
			Pet emotional factor	Support factor	Pet owner factor	Responsibility and pet health factor
Gender (N=278)	Male	84	3.18	3.69	2.43	2.83
	Female	194	3.04	3.81	2.22	2.91
	t value		1.17	-1.49	<b>2.27*</b>	-0.70
Age (N=278)	18-25 year old	143	3.16	3.86	2.23	2.97
	26 years old and above	135	3.00	3.68	2.34	2.79
	t value		1.46	<b>2.42*</b>	-1.27	1.61
Family (N=278)	Unmarried	220	3.10	3.79	2.26	2.92
	Married	58	3.01	3.70	2.38	2.75
	t value		0.69	1.02	-1.18	1.22
Individual monthly (N=274)	NTD 30,000 or less	161	3.19	3.90	2.32	2.96
	NTD 30,001 and above	113	2.94	3.60	2.24	2.80
	t value		<b>2.18*</b>	<b>3.94*</b>	0.99	1.47
Name of variable	Categories	Number of pet owners	Average score of travel constraint aspects			
			Pet emotional factor	Support factor	Pet owner factor	Responsibility and pet health factor
Education (N=272)	(1) Senior high school and	31	2.85	3.64	2.20	3.11
	(2) College and junior college	187	3.08	3.77	2.30	2.87
	(3) Graduate school and above	54	3.22	3.89	2.23	2.80
	F value		1.63	1.62	0.35	1.22
Occupatio (N=278)	(1) Industry, commerce, military,	112	3.02	3.68	2.28	2.74
	(2) Others	78	3.06	3.76	2.36	2.96
	(3) Student	88	3.18	3.90	2.23	3.01
	F value		0.42	<b>0.04*</b>	0.53	0.08
	LSD post-hoc comparison			(3)>(1)		
Dog size (N=259)	Small-sized dog	144	3.05	3.78	2.21	2.21
	Medium and large-sized dog	115	3.12	3.76	2.34	2.34
	t value			-0.66	0.27	-1.47

\*  $p \leq 0.05$

As for the constraint 9. I suggest that public transportation is not convenient enough to take my pet along to reach the tourist destination,” five strategies used by the subjects were summarized, including preparing one’s own transportation tool (27 subjects), asking someone who has a car to participate in the tourism activities together (4 subjects), looking for public transportation where pets are allowed, buying a ticket for the pet (4 subjects), smuggling the pet (8 subjects), and borrowing a car (1 subject).

As for the constraint 11. the pet-related devices and facilities at the tourist spots are poor,” the strategies used by the subjects included using the Internet, asking questions or collecting information, looking up relevant books, newspapers, and magazines, and asking other people. As for the constraint “ 3. I do not have my own transportation to take my pet along during tourism activities and thus feel perplexed,” the strategies used by the subjects included renting a car, borrowing a car, asking someone who has a car to participate in the tourism activities together, buying a car, and smuggling the pet via public transportation.

As for the other constraints, the negotiation strategies adopted by the subjects included using off-days to plan for vacations, waiting until the children grow up, trying to obtain tourism funds, resting at fixed locations, taking notice of the safety of pets, and insisting on one’s own opinions. A total of nine subjects indicated that they were unwilling to negotiate with anyone or were unable to overcome constraints. One subject suggested that there were no constraints and it was not

necessary to use negotiation to eliminate constraint. The results showed that most people will indeed eliminate constraints through negotiation when encountering them. However, few people suggested that it is too complicated to negotiate with someone so they will choose to give up the opportunity of leisure participation. For other negotiation strategies, see Table 5.

Based on the analysis results above, this study found that when facing different constraints, people may adopt the same negotiation strategy (e.g. smuggling, training the pet, etc.). In addition, when facing certain constraints, they may adopt various negotiation strategies at the same time in response. This result was consistent with that obtained by Yin (2006). Moreover, this study also found that the subjects mainly adopted behavioral strategies, and only a few strategies, such as waiting until the children grow up, insisting on their own opinions and communicating with storeowners and families were cognitive strategies. The result was consistent with that obtained in the studies conducted by Jackson & Rucks (1995) and Yin (2006).

**Table 5 : Analysis on constraint negotiation strategies**

Travel constraints	Travel constraint negotiation strategies	Frequency
1. I do not have enough time to take my pet along during tourism activities.	Using off-days to plan for vacations	10
	Waiting until the children grow up	1
2. I do not have sufficient money to bear the expenses of taking my pet along during tourism activities.	Reducing travel expenses	3
	Trying to obtain tourism funds	8
3. I do not have my own transportation to take my pet along during tourism activities and thus feel perplexed.	Renting a car	13
	Borrowing a car	6
	Looking for someone who has a car during tourism activities together.	8
	Buying a car.	2
	Smuggling the pet when taking public transportation.	1
4. I worry that the emotion of my pet cannot be well controlled.	Strengthening training	8
5. I worry that my pet cannot adapt to the new environment after leaving home.	Tying and pulling the pet to prevent danger	1
	Bringing objects that the pet is familiar with	4
6. I worry that taking my pet along during tourism activities is unwelcome to operators.	Asking the operators and communicating with them	24
	Using money to solve problems	7
	Looking for information in advance and screening out the places where pets are allowed	12
	Reducing contact with operators	7
	Smuggling	5
	Changing stores of consumption or additionally arranging schedules	12
7. I worry that the tourism location is too far and thus affects the emotion of my pet (car driven more than 3 hours).	Using pet strollers, training the dog, and preventing the operators from feeling unpleasant.	5
	Resting at fixed locations.	3
	Looking for tourist spots near home.	12
8. I worry that taking my pet along during tourism activities may involve safety concerns over the tourism process or location.	Training dogs that suffer from carsickness, allowing the condition to be improved after several times.	1
	The owner will take notice of the safety of the pet.	10
9. I suggest that there is a lack of pet-related tourism information.	Referring to other people's past experiences.	2
	Using the Internet, asking for or collecting information.	24
	Looking up relevant books, newspapers, and magazines.	6
10. I suggest that public transportation is not convenient enough to take my pet along to reach the tourist destination.	Asking other people.	12
	Preparing one's own transportation.	27
	Looking for someone who has a car to participate in the tourism activities together.	4
	Looking for public transportation where pets are allowed and buying a ticket for the pet.	4
	Smuggling the pet.	8
	Borrowing a car.	1

Travel constraints	Travel constraint negotiation strategies	Frequency
11. The pet-related devices and facilities at the tourist spot are poor.	Preparing cleaning supplies for pet use.	4
	Using limited resources.	2
	Using public facilities.	2
12. Owing to a heavy family burden, I do not have any opportunity to take my pet along during tourism activities.	Reducing the frequency of going out.	1
	Waiting until the children grow up or having a babysitter take care of them.	1
13. My family does not encourage me or agree with me taking my pet along during tourism activities.	Insisting on one's own opinions.	5
	Communicating and persuading.	7
Unwilling to negotiate or enable to overcome.		9
No constraint and it is not necessary to overcome them.		1
Uncompleted.		10

### CONCLUSIONS AND SUGGESTIONS

This study investigated the demand aspect of the pet tourism market in order to understand the constraints faced by consumers in pet tourism. It was hoped that suggestions on the supply aspect could be proposed for tourism-related operators to assess the possibility of developing potential markets. The conclusions and suggestions were summarized as follows:

(1)Based on the analysis results, more than 90% of pet owners are willing to take their pets along during future tourism activities. Consequently, it is possible to develop the pet tourism market. Tourism-related operators are advised to carefully assess the pet tourism market and develop potential markets. To achieve the purpose of participation, most people will change their negotiation strategies when facing constraints and they may also adopt various negotiation strategies in response. In terms of the demand aspect of consumers, it is possible to develop pet tourism, and the development is subject to how the supply aspect responds to future market trends.

(2)According to the sample characteristics of this study, the proportion of female subjects, college graduates, unmarried subjects, and those who kept small-sized dogs were higher. In addition, female subjects did not regard pet owner factors as a constraint to the same degree that male subjects did. Therefore, this study estimated that the major pet tourism population should be young and unmarried females. Operators should develop marketing schemes for this target population.

(3)The subjects perceived stronger constraints of the inconvenience of public transportation, poor pet-related devices and facilities, and operators' attitudes. Apparently, for the pet tourism market to be developed, it is necessary to focus on the improvement of pet-related devices and the welcome attitude of operators to attract consumers. In terms of traffic problems, most pet owners could overcome them by driving their own cars. In addition, the high speed rail, Taiwan railway service, MRT, and buses are all open to pet carriage. Passengers may take their pets along when using public transportation. The traffic aspect has become more convenient.

(4)The results showed that most people will eliminate constraints though negotiation, instead of negatively giving up the participation opportunity. This study also found that when facing different constraint factors, people may adopt the same strategy. Furthermore, when facing certain constraint factors, people may adopt various negotiation strategies at the same time in response. It is advised that operators should aggressively improve tourism-related devices and facilities to cooperate with consumers' constraint negotiation strategies and develop the pet tourism market.

In terms of follow-up studies, because there are few studies concerning pet tourism in Taiwan and this study only investigated the issue of travel constraints, it is advised to conduct more comprehensive studies on other pet tourism issues, such as the benefits brought by pet accommodation and the influence of failing to take pets along during tourism activities on pet owners' intention to travel. This study was a preliminary study with a large research scope. Subjects with and without the experiences of pet tourism were all included for discussion. Future researchers are advised to consider dividing those with and without pet tourism experiences into two groups for investigation. Moreover, this study simply investigated constraints and constraint negotiation strategies. However, other factors, such as the motivation for participating in leisure activities and the perceived strength of constraints may all affect leisure constraint negotiations. Follow-up studies are advised to include factors such as motivation for further investigation.

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