



# Constructing an International Marathon Participants' Behavioral Model in Taiwan

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## Abstract

This purpose of this study was to construct a participative behaviour model for sports tourists. The subject of the study was marathon runners' from the International Taroko Gorge Marathon and the reserachers' used purposive sampling as the sampling method. A total of 446 surveys were issued, and 363 valid surveys were returned. The effective rate was 81.3%. All collected data were analyzed by descriptive statistics, confirmatory factor analysis, and structural equation modelling. The results were as follow. Firstly, the participative behaviour model constructed in this study fitted in well in statistics. Secondly, sports tourism attraction and sports event images have a significant influence and effect on the participative motivation of sports tourists. Finally, participative motivation and participative satisfaction have significant influences and an effect on the loyalty of sports tourists. In conclusion, the sports tourism attraction and sports event image have a significant influence on the participative motivation of sports tourists and enhance the willingness to recommend and repeat participation in the sports event. Based on the above results, this study provided some practical suggestion for related sports event units and suggest directions for future research initiatives.

**Keywords:** Loyalty, participative motivation, satisfaction, sports event image, sport tourism attraction.

## Introduction

Changes in lifestyle, often means that people get more leisure time which creates a large number of travel demands. According to data from the Taiwan Tourism Bureau, in recent years, tourism development in Taiwan has shown a year-by-year growth trend both in tourist population and tourism output value,thus it appears the tourism industry cannot not be ignored.



Martin and Mason (1987) pointed out that change in the tourism market has also caused an impact on consumer demand, which produces different modes of tourism. With the current development of the international tourism industry, sports tourism is the fastest-growing part (Ritchie, Mosedale & King, 2002). Sports tourism is mainly based on sports and attracts tourists to travel to an area and promote the development of the local tourism industry. Standeven and De Knop (1999) believed that tourism and sports have an interdependent symbiotic relationship and that not only tourism influences sports, but sport equally affects tourism. They also concluded that in the global tourist market, the sports and tourism segment accounts for about 10% of the total consumption population. Up to now, the increasing sports playing population and the rise of the health consciousness, make sports tourism far more attractive.

There are many kinds of modes and sports event in sports tourism, but how to get the attention of the public and then affect the participative motivation is the biggest test. Kurtzman and Zauhar (1997) considered that sports tourism attraction is the destination providing tourists with relevant things about the sport, including the natural landscape and man-made architecture of value and thereby being attractive to tourists.

Gibson (2006) considers each sporting event to have its own brand name, so that the image of the sports event is an important factor for the future selection of destinations and sporting events for sports travelers (Lin, Ku & Lee, 2009). According to Chang (2009), the image of the sports event is the visitor's cognition of the sports event and the overall environmental feeling before the sports event is held. The Taroko Gorge Marathon, with its magnificent and distinctive canyon landscape as a selling point, has been attracting people from all over the country and the scale of the competition has also expanded year by year, and it has even become an important nationally representative leisure and recreational activity. From this, it can be seen that the Taroko Gorge Marathon is a very successful example of a combination of local characteristic and special landscapes of sports events. Therefore, this study is based on the Taroko sports tourist as a research subject.

Sports tourists in sports events are an integral part of such an event, they participate in the competition and its motivation, and their satisfaction and loyalty are an important reference index for organizers. Wu and Lin (2009) pointed out that participation motivation is the driving force of sports tourism. When sports tourists experience the fun of sports tourism and feel satisfied, this will establish a good reputation and through word of mouth, the event spreads to more sports tourists thus improving the internal-external drive of will to revisit. Participative satisfaction is the difference between before and after using the product or service (Akama & Kieti, 2003), and the loyalty which means after the service provider provides service, and customers have the intention to buy again or recommend others is vital (Cronin, Brady & Hult, 2000).

Holding a sports tournament is a kind of service provided, while the sports tourist is the customer. When sports tourists have the requirement to participate in the sports event, the motivation will be generating then triggering actions to meet the demand. While in the service process, the sports tourist will produce a good satisfaction level if they feel good about the service and will then also be willing to recommend the sports event to others or even participate again. Many cities around the world are competing to organize large-scale sports tournaments, which can be increased through media exposure and attract the attention of sports enthusiasts from all over the world (Gibson, 1998). For example, the Olympic Games, the World Cup, the Australian Open and many other tournaments have all contributed to bringing a large number of tourists to an area where they spend money thus boosting the city's image. This shows that sports tourism is a trend we should explore, and among the influence



factors, sports event image, tourism attractions, participative motivation, participative satisfaction, and loyalty are key. Therefore, it is necessary to understand the relationship between those factors and the behaviour model of the sports tourist.

Based on the above, this study aims to understand the sport tourism attraction on participants and the feeling about the sports event image which is provided by the venue of the sports event. Then the study explores the potential demand and driving force to participate in sports events, understand the relationship among sport tourism attractions, participative motivation, participative satisfaction and loyalty and then we seek to extend the sport tourists behaviour model.

## **Review of Literature**

### **Taroko Gorge Marathon**

Organizing large-scale sports events creates opportunities for people in leisure activities and meets the different needs of tourists. For example, the Taroko Gorge Marathon has successfully attracted the participation of road-running associations and the public all over the world with its magnificent and distinctive canyon landscapes. The number of domestic and foreign participants, spectators, staff members, performance groups and sponsors participating in the tournament over the years has increased in number and the scale of the competition has also expanded year by year. It has even become an important national representative leisure and recreational activity. It also shows that incorporating local characteristics and special landscapes into sports events will increase the attractiveness of the event and increase the willingness of sports travelers to participate therein. The Taroko Gorge Marathon has been listed as one of the major tournaments by the Tourism Bureau of the Ministry of Transport of Taiwan.

### **Sport Tourism**

The term sports tourism is a new concept including “sports” and “tourism”. In 1971, “sports” and “tourism” were discussed at the same time in academic seminars (De Knop, 1990), since there were also presentations followed by articles that discussed sports tourism. Sport and sightseeing in foreign countries have already thrived and the country has started to flourish in recent years. The so-called ‘sports tourism’, was defined by Standeven and De Knop (1999) as being a casual or organized excuse for working or non-working reasons, temporarily leaving a place of residence and workplace and participating in various types of active or passive sports activity. Hinch and Higham (2001) considered sport and tourism as sport-based tourism that is far from the home environment for a limited period of time.

### **Sports Tourism Attractive**

The term “attractiveness” is widely used in tourism. Chen and Chang (2006) regard attraction as a glamor created by nature and the things human beings create, making people want to go and approach them, which includes tangible, intangible and psychological aspects. Gunn (1994) pointed out that sightseeing attractions are the driving force for tourists to reach their destination, which is the power of destinations to lure visitors. Gunn and Var (2002) also pointed out that attractiveness is the driving force behind the tourist system. When the tourist decides upon the tourist attraction, the attraction becomes the main pulling force.

Kurtzman and Zauhar (1997) assert that sports tourism attraction refers to the tourism destination providing tourists with relevant activities related to sports, which includes natural landscapes and man-made architecture. Hinch and Higham (2001) consider that the sports



tourism attraction is the result of competitions which are related to physical activity while traveling, leaving their residence and exercising for a certain period of time within a certain period of time.

### **Sports Event Image**

“Image” was first used in the economic activities of human beings. It states that human beings' behaviour is guided by information and knowledge and influenced by images of individuals. Barich and Kotler (1991) argue that image is a combination of various factors that may be true or false, but does indeed guide or influence one's follow-up behaviour.

With the rise of the tourism industry, the term image is also applied to the field of tourism. Dadgostar and Isotalo (1992) point out that the destination image is the overall impression or attitude to a particular place and the overall impression that the tourist has is composed of related knowledge of the quality of the tourist destination. Jenkins (1999) argues that an individual's image of a tourist destination is unique; it could vary from person to person and consist of individual memories, associations, and evaluations. Rittichainuwat, Qu and Brown (2001) pointed out that the image of a destination is the lasting perception, belief or attitude of something that affects the pre-travel decision-making and selection process and then evaluates future decisions. Hus, Wolfe and Kang (2004) pointed out that the image of the destination was an important factor in determining whether a visitor is visiting the site because a clear understanding of the characteristic of the image that will provide important information on the formulation of a marketing strategy.

### **Participative Motivation**

Motivation is an internal factor of behaviour, which is triggered by the internal needs of individuals to meet the needs of the behaviour. Kotler (1991) proposed that motivation, also known as "drive," is a formidable pressure on individuals to seek need or satisfaction to reduce anxiety and tension. There are many theories of motivation, the most notable and widely known was the theory of demand hierarchy proposed by Maslow in 1943. Maslow believed that human motivation is caused by demand which is divided into five levels. Human needs are sequential, usually by the lower level of demand must first be met, before entering the higher level of demand. Iso-Ahola (1980) believed that the motivation of the individual to participate in recreational sports is dynamic, and it has the following characteristics, such as changing with the life cycle and personal growth environment and socialization, varying from person to person, and it may also vary depending on the situation. Van Heerden (2014) found that external factors may not have a crucial effect on individual's motivation to participate in leisure, however the attitude and perception are the importance factor to have active and healthy lifestyle.

### **Satisfaction**

Satisfaction was first applied to consumer theory by Howard and Sheth (1969) and was used to measure invisible services after measuring consumers' purchases of tangible goods. Oliver (1981) believed that consumer satisfaction refers to an immediate reaction to the level of value to which a product or service is being used in the context of a particular product or service. Kotler (1991) considered that customer satisfaction is the consumer's perception of the functional characteristics of a product and the individual's expectations of the product. By comparing the above satisfaction is formed, which is the difference between perception and expectation. In other words, satisfaction is the difference between a product or service before use and after. Akama and Kieti (2003) pointed out that visitors will have expectations of the



destination after they have been recommended to visit it by friends or relatives, advertisements or some information before they leave for travel, and the difference of their feelings after the actual experience is satisfaction.

Liu, Chang, Liu and Huang (2005) pointed out that the sports tourism satisfaction was the difference between sports tourism expectations and actual feelings of sport tourism tourists after they participated in sports tourism activities. Hsu, Huang and Cheng (2007) considered satisfaction as the satisfaction of participants in the tournament with the services provided by the organizers. The service provided by the tournament will cause the consumer to have a positive and comfortable experience, which will definitely enhance their satisfaction with the tournament and this is helpful to the development of the tourism industry (Lin, Liu & Hsu, 2010).

### **Loyalty**

The term loyalty was applied to brand loyalty research in the 1950s (Brown, 1952) before it began to apply loyalty to the behaviour of the traveler. Backman and Crompton (1991) argued that loyalty consists of behaviour loyalty and attitude loyalty. Behaviour refers to the consistency of actual purchasing behaviour and attitude is emotional preference. Griffin (1995) pointed out that loyal customers will proactively support the company's products and services. When customers are loyal to the company, the behaviour of their consumers will result in purposeful re-purchase through a decision-making mode. Oliver (1999) defines loyalty as the commitment of customers to re-purchase their own preferred goods or services in spite of the external environment. Cronin, Brady and Hult (2000) believe that if the customer can generate loyalty to the service provider, the customer will be willing to tell others, thus recommending to other consumers, re-purchase, or even be willing to pay a higher price.

### **The relationship between sports tourism attractive and participative motivation**

Chang, Li and Chiu (2007) found that the sports tourism attractive has a direct and significant influence on the participative motivation. In the study of Huang, Lin and Chang (2008) it was found that the sports tourism attraction can significantly influence participative motivation; participative motivation can also significantly affect loyalty and satisfaction, and loyalty and satisfaction are relatively high.

### **The relationship between sports event image and participative motivation**

The concept of the sports event image was extended by the image of the destination. Li (2011) explored the relationship between personality traits, tourism image, and tourism motivation in a study found that traveler's tourism image and tourism motivation have a significant positive correlation. Chen (2007) found that there is a significant positive correlation between tourists' perceptions of tourism image and tourism motivation, which indicates that the higher cognition of the tourism image, the more significant of their motivation.

### **The relationship between participative motivation and satisfaction**

Tsai, Hsieh and Tseng (2008) analyzed the participative motivation and participation satisfaction of Lishan Marathon participants, and they found that the overall participative motivation was significant and moderately correlated with the overall satisfaction and participative motivation, and this also has a significant prediction for participation satisfaction. In the study of motivation, attraction, and satisfaction of sports tourism, Huang et. al. (2008) found that the motivation of sports tourists will significantly affect their participative satisfaction; the higher the satisfaction, the higher the loyalty.



### The relationship between participative motivation and loyalty

Chang et. al. (2007) explored the model of participative of sports tourists in the sports events; He found that the participative motivation of sports tourists has a significant influence on sports tourism loyalty. Wu, Tu, Yang and Lu (2008) found that participation motivation and loyalty showed a significant positive impact.

### The relationship between participative satisfaction and loyalty

Kotler (1994) believed that customers have a certain level of satisfaction or dissatisfaction after purchasing a product or service. If the customer is satisfied, there will be a higher willingness to re-purchase. Chang, Tan and Chen (2008) found that the satisfaction of sports tourist in Maolin National Scenic Area had a significant positive influence on tourists' willingness to revisit Maolin National Scenic Area. Russell, McColl and Coote (2007) found that both satisfaction and involvement were significant for behavioural loyalty and attitude loyalty. Tsao and Lin (2012) found that in the study of sports images, concerning satisfaction and willingness of revisit, it is known that the more positive the satisfaction level, this will have a positive influence on the desire to re-visit.

## Research Methodology

### Subject of Study

The subject of the study was the sports tourists of the Taroko Gorge Marathon. Purposive sampling was used as the desired sampling method, Surveys were sent on November 3, 2012, and a total of 446 surveys were issued, 363 valid samples were returned and the effective rate was thus 81.3%.

### Research Tools

In this study, a scale measurement was used - Likert's five-point scale. In item analysis results, the sports tourism attraction scale referenced to Chang's (2006) measurement method, with a total of 10 questions, the CR value was between 4.14~8.81, the correlation coefficient between .43~.79. Sports event image scale reference was according to Fang, Wu and Wang's (2012) measurement method, with a total of 10 questions, and the CR value was between 5.59~13.42, the correlation coefficient was between .65~ .77. The participative motivation scale was referenced to Tsai, Hsieh and Tseng's (2008) measurements method, a total of 11 questions, and the CR value was between 4.73~14.80, with the correlation coefficient between .62~.84. Participative satisfaction scale references to Tsai, Hsieh and Tseng's (2008) measurement method, allowed a total of 12 questions, and the CR value was between 3.71~10.71, while the correlation coefficient was between .47~.78. According to Anderson and Gerbing (1988), to proceed with SEM, the research framework has to test a model fit to confirm the model's consistency and stability. Therefore, confirmatory factor analysis (CFA) was used to test the data's reliability. After deleting some items, most of the values reached the standard.

**Table 1.** Model fit

	GFI	AGFI	RMSEA	NFI	RFI	CFI	PNFI	PGFI	$\chi^2/df>5$
criterion	>.80	>.80	<.08	>.90	>.90	>.90	>.50	>.50	>5
Sport tourism	.97	.94	.06	.97	.95	.98	.65	.52	2.59
Sport event image	.94	.89	.08	.93	.91	.95	.67	.55	3.80
articipative motivator	.99	.95	.05	.97	.96	.99	.65	.52	1.83
rticipative satisfactio	.96	.92	.07	.96	.95	.98	.68	.56	2.51



The factor loading of sports tourism attraction is between .50~.92; C.R. are .89, .74; .91; AVE are .50, .73, .78. The factor loading of sports event image is between .70~.86; C.R. are .80, .82, .86; AVE are .57, .61, .62. The factor loading of participative motivation is between .56~.86; C.R. are .77, .79, .86; AVE are .53, .56, .68. The factor loading of participative satisfaction is between .64~.86; C.R. are .79, .84, .90; AVE are .57, .63, .69. The factor loading of loyalty is between .71~.94; C.R. is .87; AVE is .70. From the results, it indicates this study had a good reliability and validity.

## Data Analysis

To understand the issues and purpose discussed in this study in this study, SPSS 18.0 and AMOS 17.0 were used to analyze the data, including descriptive statistics, confirmatory factor analysis, and structural equation modeling.

## Results and Discussion

### Subject of Data Analysis

The subjects in this study were mainly males (72.7%), aged around 20-39 (78.7%); their education level was mainly university (46.3%) and they were mostly unmarried (67.8%); their occupation was dominated by industry (20.7%); they mostly participate in half-marathons (77.1%) and some participated more than twice (74.1%).

### Structural Equation Model Analysis of the behaviour model of participative sports tourists' in Taroko Gorge Marathon

According to West, Finch and Curran (1995), in normal distribution, the skewness coefficient should be less than 2, and kurtosis coefficient shouldn't be more than 7 as a criterion. From the results, the skewness coefficient was between -1.580 to .127, kurtosis coefficient is between -.711 to 2.551, indicating that sample of this study were qualified with the normality test.

In overall model fit analysis, most of the values have reached the standard, indicating the overall model fits well.

**Table 2.** Model fit of the overall model

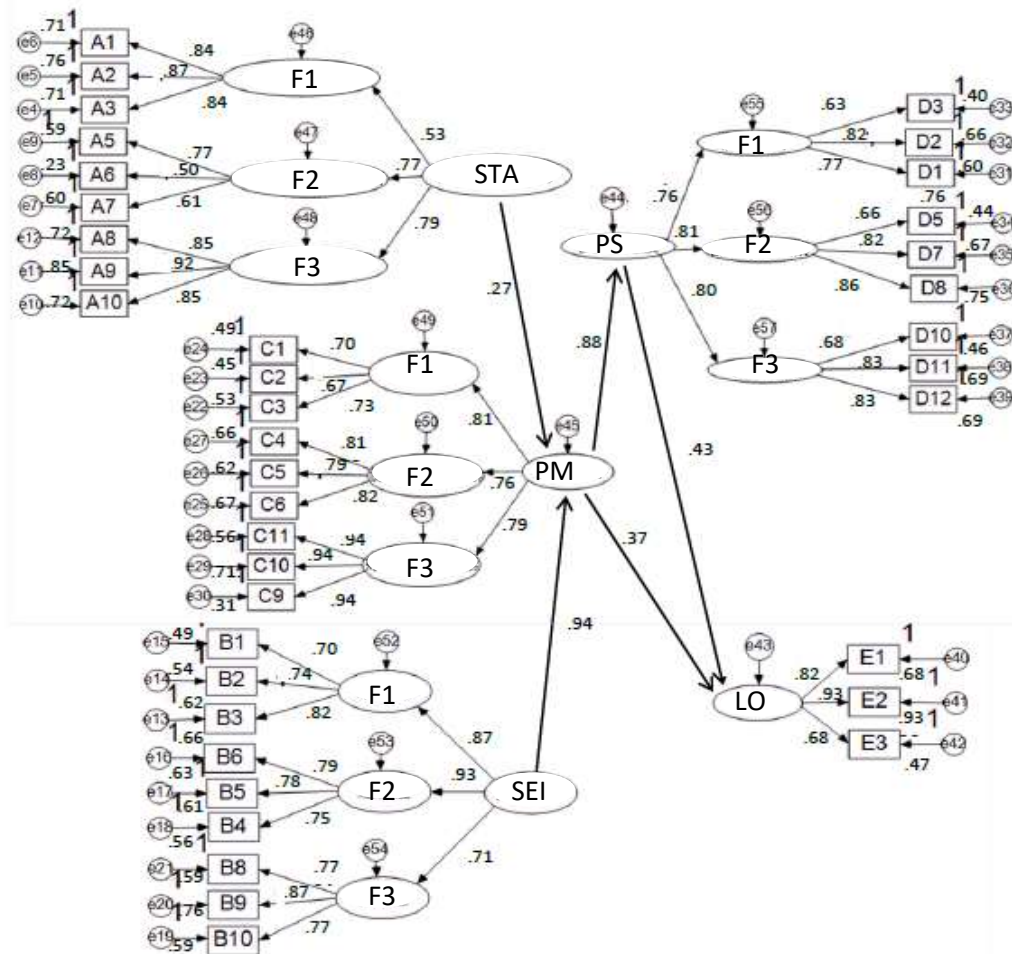
	GFI	AGFI	RMSEA	NFI	RFI	CFI	PNFI	PGFI	$\chi^2/df > 5$
criterion	>.80	>.80	<.08	>.90	>.90	>.90	>.50	>.50	>5
Overall model	.82	.80	.06	.83	.82	.90	.77	.71	2.22

This study used SEM to analyze the relevance of the sport tourism, sport event image, motivation and satisfaction. As a result of the analysis, sports tourism attraction had a significant positive influence on participative motivation ( $t= 4.73$ ,  $p<.05$ , regression coefficient=.27), but the regression coefficient was low, further analysis the study found that some question from sport tourism attraction had low coefficients which mean celebrity participation in sports event and the surrounding activities are not the main motivation of the sport tourists, this factor may be the reason for low coefficient of sport tourism attractions.

The sports event image had a significant positive influence on participative motivation ( $t=10.26$ ,  $p<.05$ ; regression coefficient=.94), also we found that participative motivation has significant positive influence on participative satisfaction and loyalty ( $t= 9.70$ ,  $2.52$ ,  $p<.05$ ; regression coefficient=.88, .37), participative satisfaction had significant positive influence on loyalty ( $t=2.73$ ,  $p<.05$ ; regression coefficient=.43). It was further found that sport tourism

attraction and sports event image can indirectly affect participative satisfaction and loyalty through participative motivation.

**Figure 1.** Path Analysis of Behaviour Model of Participative Sports Tourists'



Noted: STA= Sports tourism attraction, PM= Participative motivation, SEI= Sports event image, PS= Participative satisfaction, LO= Loyalty

In addition, this study used the discriminant validity to measure different aspects and verify whether there had differences thus correlation between different aspects should be lowly related. This study used AVE test to measure the diverse aspects. Fornell and Larcker (1981) pointed out that in comparing the squares of the correlation coefficients of all variables with the AVE values, when the square is less than AVE, it means that the variables in this study have good discriminant validity.

**Table 3.** Overall model confident interval discriminant validity test analysis

rt tourism attraction	rts event image	icipative motivation	icipative satisfaction	alty
rt tourism attraction	rts event image	icipative motivation	icipative satisfaction	alty

Noted : Bold is the AVE value for each variable





## Conclusion

The sport tourist behaviour model of this study was constructed based on the sports tourism attraction, sports event image, participative motivation, participative satisfaction and loyalty. According to the overall model fitness result, these five variables can constitute a behaviour pattern. This study validates the behaviour patterns of sports tourists participating in the Taroko Gorge Marathon. The causal relationship are sports tourism attraction and sports event image and they had a positive influence on participative motivation, which is an enhancement of sports tourism attraction and sports event image, participative motivation will also be enhanced. After participating in the sports event, sports tourists' feelings and satisfaction also rose in loyalty to participation relatively. A feeling of satisfaction will also increase the loyalty of of sports tourists, which had a greater willingness to recommend others and continue their participation in future.

Based on the research results, this study proposed the following suggestions: 1. Organizers should follow the natural landscape of Taroko National Scenic Area as the call for the continued handling of arts activities and sports events, it could be combined into a series of carnivals, becoming local special events and enhancing the public's impression of the place through activities or events, thus increasing their willingness to participate. In addition, enhance public participation motivation by using the sports event route planning to challenge the self-spiritual and physical benefits and sports promotion as a slogan. 2. The Taroko National Scenic Area, located in the eastern part of Taiwan, has made sports tourists a major test for traffic arrangements due to their geographical location. It is suggested that the organizers can cooperate with the Taiwan Railways and the hotel industry in creating suitable traveling packages, including the tram ticket, attraction ticket, accommodation tickets and other related necessities.

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