

Segmenting Motivations for the Satisfaction of Spectators in 2009 World Games

Chin-Huang Huang¹⁺, Chun-Hung Lee² and Chi-Shin Hou¹

¹ National Taiwan College of Physical Education, Taiwan

² National Dong Hwa University, Taiwan

Abstract. The 2009 World Games was held in Kaoshiung City and attracted over 260 thousand visitors. The motivations for spectators joined in World Games are quite different. One way to meet the needs and increase the satisfactions of spectators is to identify segmentation in a market based on their motivations and experiences. The segmentation of motivations would be a successful marketing strategy. This research performed factor and cluster analysis to extract the main dimensions of motivations and segmenting the motivation factors into different groups. The results revealed that the 'multiple goals seekers' is most important and largest market segmentation for fans' motivations and had the highest level of satisfaction in the World Games.

Keywords: market segmentation, spectator motivation, satisfaction

1. Introduction

The World Games was the first Olympic-related event hosted by the Republic of China (Taiwan), which took place in Kaohsiung, Taiwan, from July 16, 2009 to July 26, 2009. Nearly 6,000 athletes, officials, coaches, referees and others from 103 countries participated in the event, setting a new record for the multi-sport competition. This event also attracted over 260 thousand visitors. The fans consume sport due to different motives, and the management bureau could identify the special needs from fans' motivations. However, one way to uncover customers' needs is to identify the underlying segmentation in a market. Improving one's understanding of what motivates customers is as useful for marketing managers to develop effective and creative message strategies, and refine specific advertising appeals.

This study investigated the motivations and satisfactions of visitors for those who joined in the 2009 World Games. Meanwhile, factor analysis method is used to extract the major factorial dimensions of the motivations. In advance, cluster analysis is adopted to make a segmentation based on their different motivation factors. Finally, this study use ANOVA to test the different tourist satisfaction levels between the segmented motivation groups. The remainder of the study is organized as follows. The next section is literature review about the motivation of visitors. Section 3 demonstrates the empirical results. In the conclusion, the main results and implications for management are discussed in order to improve the level of satisfaction for tourists. The managers may also developed new business strategies to achieve special sport event successfully.

2. Motivation and experience of spectators

There are plentiful motives attracting spectators to participate in sport events. Fans motives can predict the interest and consumption behavior of the event. Previous experience will affect future interest to watching sport event[1]. Bristow and Schneider [2] followed Churchill's [3] Sport Fan Motivation Scale (SFMS) to measure fans' motivations and find three dimensions: winning, socialization, and history/tradition. For many consumers, socialization and spending time with friends are most important factors [4]. Sloan [5].

⁺ Corresponding author. Tel.: + 886-5362-1263ext5316; fax: +886-5362-8542.
E-mail address: hch55@ntcpe.edu.tw.

found five categories concern about motives of sport spectators: salubrious effects, stress/stimulation seeking, catharsis/ aggression, entertainment, and achievement seeking. Wann [6, 7] and Wann, Melnick, Russel and Peace [8] found eight common motives for those who attend sport events: eustress (excitement and arousal), self-esteem, escape, entertainment, economic, aesthetic, group affiliation, and family. Trail and James [9] developed a Motivation Scale for Sport Consumption (MSSC) to remedy the content of SFMS, which consists of nine factors including achievement, acquisition of knowledge, aesthetics, drama, escape, family, physical attraction, physical skills of players, and social interaction.

The consumer experiences will provide a better understanding of their motivation [10]. Customer perceptions of service experiences are vital to the success for all service organization, and so do sporting event [11]. A customer pays time to enjoy a series of memorable events and generates emotional experience, which contains physical and mental presence[12]. When the emotional experience applies in sport tourism, the context of 'physical and social' is not only an external resource of behavior, but also the functions in construction of information and in determining behavior [10]. The business has to offer and filters the experience through the expectations and mental images for the customer who experiences the product of service environment [13]. Because the physical surroundings of the sports encounter has a strongly effect affecting spectators' perception experiences [14]. The spectators participate in the World Game will consumed in various ways to seek pleasurable experiences with subjective emotional reactions [15]. They also pursuit of a new physical experience is based upon self-actualization through one's intellectual and physical aptitude [10].

Visitor experiences in cognitive and emotional aspects are the bases of satisfaction [16]. The satisfaction level of spectators experiences are association with a sport event that can be valued the gap between their predictive expectations and the actually perceptions [17]. The methods for valuing the satisfaction of experience can adopt expectancy-confirmation framework to determine the degree of consumer predictive expectations, which are matched, exceeded, or not met their need [18]. The judgment about the extent of expectations satisfaction depend on the customers' perception about the service that provider actual delivery to them.

3. Results

On-site samples were conducted from July 16 to 26, 2009. During the period 500 people were asked to complete a questionnaire in convenient, and 90 samples were done in terms of artistic and dance sports, 120 samples in ball sports, 50 samples in martial arts, 60 samples in precision sports, 50 samples in strength sports, and 120 samples in trends sports. Meanwhile, 473 complete responses replies were obtained, yielding a response rate of 94.6%.

3.1. Analysis of visitors' motivations

Since the motivation of the visitors is quite different for various event [19]. In order to extract the major factorial dimension, this study using exploratory factor analysis method to do it. The motivation items follow the previous researches of Wann [6, 7], Wann, Schrader, and Wilson[20], and Wann et al. [8]. The questionnaire of visitor's motivation were asked to evaluate all statements on a five-point Likert scale (1=Strongly disagree and 5=Strongly agree).

Twenty four motivational items were factor analyzed using a principle component method with a Varimax rotation procedure to extract the set of inter-related variables into a smaller number of uncorrelated factors by calculating the factor score loadings associated with the 2009 World Games. Table 1 presents the result of the factor analysis for residual items from the five dimensions with the factor loading greater than 0.5. This indicates a reasonably high correlation between the delineated factors and individual items. Meanwhile, all factors with eigenvalues greater than 1, accounted for 59.049% of the total variance.

The first dimension is the 'eustress' attribute, which accounted for 14.53% of the total variance with a reliability of coefficient of 0.81. The relatively large proportion of the total variance for this factor might be attributed to the fact that 'eustress' was the central theme of the event. The other dimensions are 'escape', 'entertainment', 'group affiliation', and 'family/friend' attributes, which accounted for a total variance with

12.32%, 11.47%, 11.08% and 10.09%, respectively. The reliability of coefficients is 0.91, 0.72, 0.71 and 0.72, respectively.

After factor analysis, this study extracted 5 dimensions from the visitors' leisure motivations and obtained their factor scores, providing for a cluster analysis to understand characteristics based on their different motivations.

Table1 Results of factor analysis for World Games visitors' motivation

Motivation items	Motivation factor				
	eustress	escape	entertainment	group affiliation	family /friend
I like the stimulation I get from watching sports.	.787				
One of the reasons I watch the world games is that I get pumped up when I am watching my favorite teams.	.721				
One of the reasons I watch the world games is that I enjoy being physiologically aroused by the competition.	.687				
The unpredictable results of WG make me get involved in the atmosphere on watching games more.	.586				
It makes me keep in a good mood while my favorite team gets winning.	.539				
It makes me feel excited while my favorite team or players showing up on the World Games.	.525				
One of the reasons I watch the World Games is that making me to forget my problems.		.880			
To me, watching the World Games is that it takes me away from life's hassles.		.856			
I watch the World Games is that it's an opportunity to temporarily escape life's problems.		.850			
Watching the World Games, I can see more sidelines highlights			.654		
It makes me want to watch games due to the unique items of the World Games.			.653		
I enjoy watching games because of their entertainment value.			.624		
I would go to watch the World Games based on its more options..			.581		
It is a good time for me to watch games.			.547		
The reason to watching the World Games is most of my friends is sport fans.				.768	
I think I can make many friends who love games in the World Games.				.679	
I'd like to watch games with a large group of people.				.627	
I think watching the World Games. can raise my confidence.				.524	
It's an opportunity to get along with my family on watching the World Games.					.788
It will make whole family get closer to watching the World Games. together.					.692
It's an opportunity to get along with my friends on watching the World Games.					.688
Eigenvalue	3.05	2.59	2.41	2.33	2.12
Cumulative %	14.53	26.85	38.32	49.40	59.49
Cronbach's α	0.81	0.91	0.72	0.71	0.72

3.2. Attributes of motivation cluster

One way to find a visitor's needs is to identify the underlying segmentation in a market, acknowledging that needs likely vary across the segments. To improve the understanding of the factor structure, cluster analysis is adopted for the motivation factors. First, Ward's hierarchical method was used to decide cluster number. Based on the motivational factors score, 4 was found to be the best cluster number. Next, the K-means clustering method is used to divide the four clusters.

The analysis of variance (ANOVA) test indicates that all five factors contributed to four motivational clusters, including: 'eustress seekers', 'entertainment seekers', 'multiple goals seekers', and 'family/friendly seekers', which exhibited significant differences (see Table 2). Scheffe's multiple ranges were further used to find detailed differences between the clusters, with respect to each factor. The result revealed that the 'eustress' factor had the highest mean score in all the clusters and represented an important motive for the World Games. The most important market segmentation identified by the cluster analysis is the 'multiple

goals seekers' having the largest segment (34.25%). In accordance with the results, the segmentation could help marketing managers make the appropriate decision in order to attract more visitors' attendance to sport event.

Table 2 Results of cluster analysis for World Games visitors' motivation

	Eustress	Escape	Entertainment	Group affiliation	Family/friendly	Cluster name
Cluster I (n=84)	4.59	4.00	4.46	3.20	3.45	eustress seekers
Cluster II (n=86)	4.48	2.63	4.30	3.80	3.56	entertainment seekers
Cluster III (n=162)	4.21	4.01	3.34	3.91	4.15	multiple goals seekers
Cluster IV(n=141)	4.11	3.28	3.61	3.31	3.62	family/friendly seekers
F-value	25.39***	72.18***	127.48***	51.16***	34.89***	
Scheffe I-II	0.11	1.37***	0.16*	-0.72***	-0.10	
I-III	0.39***	-0.10	0.13	-0.69***	-0.68***	
I-IV	0.47***	0.72***	0.85***	-0.07	-0.19	
II-III	0.28***	-1.38***	-0.04	0.04	-0.58***	
II-IV	0.36***	-0.65***	0.69***	0.65***	-0.09	
III-IV	0.08	0.73***	0.72***	0.62***	0.49***	

*P<0.1, ** p<0.05, ***p<0.01

3.3. The satisfaction of motivations

The visitors participated to the World Games have different attributes of motivation clusters, which leads various level of satisfaction. In this study, one way ANOVA is adopted to test the differences between the motivational clusters on satisfaction in the World Games. The results are shown in Tables 3.

The ANOVA test reveals that there are significantly different overall satisfaction levels between motivation and experience clusters (F=9.24, F=13.34, p<0.01). The Scheffe multiple ranges are used to find further detailed differences between the clusters with respect to satisfaction level. The result of Scheffe test for motivation clusters shows that the cluster of multipurpose seekers has the highest level of satisfaction and significant differences respective to other clusters. In other words, the multipurpose seekers group is the most important segment for visitors' motivations in overall levels of satisfaction. The manager should try to hold those who have different goals to meet their needs in sport event. Meanwhile, the family/friendly seekers group has the lowest level of satisfaction in the 2009 World Games. The manager should pay attention to design the plentiful programs to attract more families or friends to join sport event.

Table 3 ANOVA tests on satisfaction by motivation clusters

Motivation Cluster	Eustress seekers I	Entertainment seekers II	Multipurpose seekers III	Family/friendly seekers IV	F value	
Satisfaction	4.01	4.02	4.09	3.78	9.24***	
Scheffe test	I-II	I-III	I-IV	II-III	II-IV	III-IV
Difference	-0.01	-0.07	0.23***	-0.07	0.24**	0.31***

** p<0.05, ***p<0.01

4. Conclusions

The 2009 World Games was the first Olympic-related event hosted by the Republic of China (Taiwan) and attracted over 260 thousand visitors. The main motivations of spectators' attributes are 'eustress', 'escape', 'entertainment', 'group affiliation', and 'family/friend' and divided into four groups: 'eustress seekers', 'entertainment seekers', 'multiple goals seekers' and 'family/friendly seekers'. The most important market segmentation on visitors' motivations is the 'multiple goals seekers', which also has the highest level of satisfaction. The most important and largest market segmentation on visitors' motivations is the 'multiple

goals seekers', the result is the same as the researches of James and Ross [21] and Matsuoka, Chelladurai, and Harada [22]. If the festival managers want to attract more visitors to the event, they should design more vivid activities to meet their need and increase their satisfaction.

Segmenting markets to understand the visitors' characteristics based on motivations are important for successful sports event. Marketing managers might use the information to develop effective creative and message strategies to attract more sport fans. This study could possibly help marketing managers to increase fan attendance from the segmentation of visitors' motivations on sporting events. They might tout the activities such as tail parties to promote targets cluster: the family/friendly motivation cluster to attend sporting events and increase their satisfaction.

In the future, researchers are encouraged to extend this research to find what motivated and experienced factors will influence the level of satisfaction. Future researchers should incorporate a better understanding of the specific needs of visitors in the demand function to improve managers' marketing programs. Furthermore, additional data could be gathered from participants regarding the nature of encounters to clarify their perceptions of quality. The perception variable can be introduced into a recreational demand model in order to estimate the recreational benefits, which will be an important data for cost benefit analysis.

5. References

- [1] N.-S. Kim, and L., Chalip. Why travel to the FIFA World Cup? Effects of motives, background, interest, and constraints. *Tourism Management*, 2004, 25: 695-707.
- [2] D., Bristow, and K. Schneider. The sports fan motivation scale: Development and testing. *The Marketing Management Journal*, 2003, 13(2): 115-121.
- [3] G.A., Churchill. A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 1979, XVI (February): 64-73.
- [4] D.W., Pan, T.E., Gabert, E.C., McGaugh, and S. E., Branvold. Factors and differential demographic effects on purchases of season tickets for intercollegiate basketball games. *Journal of Sport Behavior*, 1997, 20: 447-464.
- [5] L. R., Sloan. The Motives of Sports Fans. In Goldstein, J.D. (Ed). *Sports, games, and play: Social and psychosocial viewpoints* (2nd ed.) (pp. 175-240). Hillsdale, NJ: Lawrence Erlbaum Associates, 1989.
- [6] D.L., Wann. Preliminary validation of the sport fan motivation scale. *Journal of Sport and Social Issues*, 1995, 19(4): 337-396.
- [7] D.L., Wann. *Sport Psychology*. Upper Saddle River, NJ: Prentice Hall, 1997.
- [8] D.L., Wann, M.J., Melnick, G.W., Russel, and D.G., Peace. *Sport Fans: The Psychology and Social Impact of Spectators*. New York: Routledge, 2001.
- [9] G.T., Trail, and J.D., James. The motivation scale for sport consumption: Assessment of the scale's psychometric proper-ties. *Journal of Sport Behavior*, 2001, 24(1): 108-127.
- [10] P., Bouchet, A.-M., Lebrun, and S., Auvergne. Sport tourism consumer experiences: A comprehensive model. *Journal of Sport Tourism*, 2004, 9(2): 127-140.
- [11] S.W., Kelly, and L.W., Turley. Consumer perceptions of service quality attributes at sporting events. *Journal of Business Research*, 2001, 54: 161-166.
- [12] R., Komppula. Developing the quality of a tourist experience product in the case of nature-based activity services. *Scandinavian Journal of Hospitality and Tourism*, 2006, 6(2):136-149.
- [13] M.J., Bitner. Servicecapes: The impact of physical surroundings on customers an employee. *Journal of Marketing*, 1992, 56: 57-71.
- [14] M.B., Holbrook, and E.C., Hirschman. The experiential aspects of consumption: consumer fantasies, feelings and fun. *Journal of Consumer Research*, 1982, 9, 132-140.
- [15] C., de Rojas, and C., Camarero. Visitors' experience, mood and satisfaction in a heritage context: evidence from an interpretation center. *Tourism Management*, 2008, 29: 525-537.
- [16] V.A., Zeithaml, L.K., Berry, and A., Parasuraman. The nature and determinants of customer expectations of service. *Journal of the Academic Marketing Science*, 1993, 21: 1-12.

- [17] T.A., Oliva, R.L., Oliver, and I.C., MacMillan. A Catastrophe model for developing service satisfaction strategies. *Journal of Marketing*, 1992, 56(3): 83-95.
- [18] D., Scott. A comparison of visitors' motivations to attend three urban festivals. *Festival Management and Event Tourism*, 1996, 3(3): 121-128.
- [19] D.L., Wann, M.P., Schrader, and A.M., Wilson. Sport fan motivation: Questionnaire validation, comparisons by sport, and relationship to athletic motivation. *Journal Sport Behavior*, 1999, 22: 114-139.
- [20] B.H., Schmitt. *Experiential Marketing: How to Get Customers to Sense, Feel, Think, Act, and Relate to Your Company and Brands*. NY: Free Press, 1999.
- [21] J. D., James, and S. D., Ross. The motives of sports consumers: A comparison of Major and Minor League Baseball. *International Journal of Sport Management*, 2002, 3(3): 180 - 198.
- [22] H., TMatsuoka, P., Chelladurai, and M. Harada. Direct and interaction effects of team identification and satisfaction on intention to attend games. *Sport Marketing Quarterly*, 2003, 12: 244-253.