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#### SEGMENTATION ANALYSIS OF PARTICIPATORY BEHAVIOUR IN ROAD RACE EVENTS IN TAIWAN

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#### *Abstract*

The purpose of this study was to explore a segregation analysis of the participatory behaviour of Taiwan's road race participants, and to understand the difference between participants' demographic variables and participatory behaviours. The methods integrated existing literature to develop a survey examining the effects of participating behaviour for road race events. Purposive sampling was used to obtain 1,556 valid questionnaires from representatives of 12 road race events in Taiwan. The collected data were analysed with cluster analysis, discriminant analysis and a chi-square test. The results revealed the following: 1) participants could be effectively segmented into the following groups: "Male and High Experience Group" (742/47.7%), "Female and High Experience Group" (551/35.4%), and "Middle and Low Experience Group" (263/16.9%); gender, intention, revisiting behaviour and satisfaction were the most important segregation variables. 2) The above three groups were analysed by discriminant analysis and 91.3% of observations could be correctly classified. 3) There was a significant difference in the results of the cross-analysis and chi-square test on gender, age, educational level, occupation, income and participation rate in the above events. This study has found that gender, intention, revisiting behaviour and satisfaction were the most important segmentation variables for the participants of road race events in Taiwan. The marketing and planning strategies of road race events should primarily focus on gender, event quality and event image. Moreover, they should aim to strengthen the participation experience of the "Middle and Low Experience Group" to enhance their revisiting behaviour and participation intention.

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**Keywords:** Road race events, segmentation market, participation behaviour, cluster analysis, discriminant analysis.



## 1. Introduction

Sport and sport tourism are believed to be among the most popular leisure experiences worldwide; consequently, they are now regarded by many to be the largest global social phenomenon and tourist industry (Kurtzman & Zauhar, 2005). Research indicates that tourism and sport are cognates and closely interrelated social phenomena (Radicchi, 2013; Sobry, 2011). Indeed, Keller (2002) concluded that tourism, as an experience-oriented activity, and sport, as a performance-oriented activity, are much like Siamese twins. Therefore, sport and tourism have increased dramatically as their relationships are very compatible; the combination of these two industries has created what is known as sport tourism. Moreover, sport events are considered to be important business and many countries are competing to host sport events given the advantages for the host country (Jönsson, & Lewis, 2014).

In the current development trend of sports events hosting, small-scale sporting events have become potential tourist activities hosted by the community (Kaplanidou & Gibson, 2010; Koo, Byon, & Baker, 2014). Some events, including road race events, Senior Games, and Masters Games, have gradually established themselves as “good events” because the well-known “good locations” attract foreign tourists (Oshimi & Harada, 2016; Wicker, Hallmann, & Zhang, 2012). Compared to mega-sporting events, marathons are considered as small-scale, single day events that lack infrastructure investment. However, they can successfully create considerable economic advantages during non-peak seasons (Kotze, 2006).

During the last decades, running has become a popular and democratized leisure sport, which has culminated in the second wave of running (Van Bottenburg, 2006). In recent years, Taiwanese people have become more enthusiastic about participating in road race activities. According to Runners' Plaza (2018), the number of annual road race events has increased seventeen-fold over the last 13 years, from 75 events held in 2005 to 1,299 events held in 2017 (Table 1). The number of participants in these events has also significantly increased. An industry-related pattern has emerged from direct and indirect consumer spending at road race events, affecting social, environmental, and economic aspects of their host communities (Agrusa, Kim, & Lema, 2011; Liu, Chuang, Chang, & Chang, 2017; Liu, Hsu, Chen, & Chuang, 2015; Liu, Tseng, Lee, & Tung, 2016).

**Table 01.** Taiwan road race events trends between 2005-2017

Year	Ultra-Marathon	Marathon	Half Marathon	11-20 Km	6-10 Km	5 km or less	Triathlon	Total
2005	2	9	10	8	24	19	3	75
2006	9	17	16	16	49	47	16	170
2007	2	13	11	6	29	23	10	94
2008	12	25	26	13	54	42	16	188
2009	11	32	32	9	50	61	12	207
2010	12	33	35	12	55	61	21	229
2011	9	42	48	19	64	68	33	283
2012	22	50	63	27	71	78	32	343
2013	29	77	102	50	120	94	36	508
2014	51	136	214	86	226	192	50	955
2015	181	153	262	115	288	278	61	1338
2016	206	166	304	102	232	244	61	1315
2017	140	160	285	126	268	251	69	1299

Data resource: Runners' Plaza (2018). ‘National tournament’. ‘National tournament’. 2018, 02, 23. retrieved from <http://www.taipeimarathon.org.tw/>

Modern marketing is based on consumer demand orientation, however, the motivation, demand, preference and consumer behaviour of each individual consumer are not the same. Taking into consideration the scarcity of resources, to maximize consumer satisfaction or intention, the market should be segmented, and the products and services ought to be produced based on the characteristics and needs of consumers (Schiffman & Kanuk, 2010; Solomon, Rees, Ukoumunne, Metcalf, & Hillsdon, 2013). The market segmentation process involves portioning heterogeneous markets into smaller, more homogeneous market segments distinguishable according to their different consumer needs, characteristics or behaviours (Kotler & Armstrong, 1980). The concept of organizations becomes more efficient when segmenting their customers. Tailoring more focused services on the specific interests of each segment (Dickson & Ginter, 1987), although not new, remains a highly topical approach and necessary for organizations to attain sustainability. Therefore, the use of consumer segmentation is a strategic tool for responding to an increasingly competitive marketplace (Dolnicar & Grün, 2008).

Regarding the consumer segmentation method, Kotler and Armstrong (1980) propose that there is not a single correct way of segmenting a particular market; hence, the literature contains several different techniques that apply either one or a combination of four segmentation types (e.g., geographic, demographic, psycho-graphic and behavioural). According to Frochot and Morrison (2001), several approaches are applicable to carrying out consumer segmentation while highlighting three fundamental aspects: the destination's characteristics, visitor needs and motivations, and consumer characteristics. However, the factors that influence road race or marathon events participation behaviour are as follows: demographics, motivation, past experiences, event image, destination image, satisfaction and revisiting behaviour (Liu, Liu, Tung, & Lee, 2017). Recent development trends of road race events suggest that these factors have expanded the group of runners to a large extent. Hence, runners have become more heterogeneous in terms of sociodemographic characteristics and motives (Ogles & Masters, 2003; Vos, Scheerder, Boen, & Feys, 2008). Differentiation within this heterogeneity enables the identification of relevant consumer (runners') groups. This information would be very useful for the host city, organisers, clubs, associations and industries in order to develop more effective marketing communications approaches. Therefore, whenever defining or adjusting marketing strategies, it would seem advantageous to assess the demographics and participation behaviour attributes of a group of participants of road race or marathon events, before measuring their level of participation behaviour after the experience.

## **2. Problem Statement**

Through the foregoing analysis, it is evident that although Taiwan's road race activities are flourishing, competition for hosting road race events has become fierce. Therefore, it is hoped that by exploring the demographic characteristics, participation behaviour, and market segmentation of participants, the organizers can better understand the participants so they can provide quality services that meet their needs. In addition, to enable the organizers to maintain their existing market share in the highly competitive 'Red Sea' market and even break through the current situation, it is necessary to understand participants' motivation and participation behaviour with regard to road race events. Understanding this will enable organisers to increase contestants' participation willingness and loyalty to road race events.

### 3. Research Questions

The following research questions have been devised so that organisers of road race events can better understand participants and provide better service quality to meet their needs:

- 3.1. To explore the segmentation cluster of road race events' participants in demographic variables and participation behaviour.
- 3.2. To confirm the effectiveness of discriminant analysis of segmentation clusters.
- 3.3. To compare the differences in the demographics of participants of road race events between segmentation groups.

### 4. Purpose of the Study

The purpose of this study is to explore a segregation analysis of the participatory behaviour of Taiwan's road race participants and to understand the difference between participants' demographic variables and participatory behaviours. This will enable us to provide event organizers with information regarding target markets, marketing strategies and activities planning in the future.

### 5. Research Methods

This study mainly adopts a questionnaire survey method and comprehensively researches the relevant research literature development questionnaires to investigate the demographic variables and participation behaviours of road race participants.

#### 5.1. Data Collection

This study targeted road race event participants who have participated in road race events over the past year in Taiwan. Both purposive sampling and convenience sampling methods were adopted to collect data from those aged between 18 and 79. A total of 2,000 questionnaires were distributed to people who had participated in road race events between October 20, 2015 and February 25, 2016; a total of 1,556 valid questionnaires were collected (Table 2).

**Table 02.** Summary of survey events, time, and number of respondents N=1556

Survey Events & Survey Time	Distributed	Valid	%
2015 Taipei Marathon/ 2015/12/20	300	243	81.00
2015 Shin-Chu City Marathon/2015/12/27	150	112	74.67
2015 Nantou Marathon/2015/11/29	180	142	78.89
2015 Shengang Dong Nan Marathon/2015/12/06	100	76	76.00
2016 Snow Mountain Marathon/2016/01/10	120	77	64.17
2015 Pingtung Cycle Road Marathon/2015/11/22	150	111	74.00
2015 Taiwan Black Bear Run/2015/12/06	80	44	55.00
2015 Renwu Valley Tree Marathon/2015/12/27	120	90	75.00
2016 Kaohsiung Mizuno International Marathon/2016/02/21	120	96	80.00
2015 Taroko Gorge Marathon/2015/11/07	230	191	83.04
2015 Brown Boulevard Marathon/2015/11/08	150	111	74.00
2016 Kinmen Marathon/2016/02/28	300	263	87.67
<b>Total</b>	<b>2000</b>	<b>1556</b>	<b>77.80</b>

## 5.2. Respondents profile

The demographic analysis of questionnaire responses comprised 948 males (60.9%) and 608 females (39.1%), whose average age was 35.63 (SD=10.68); the highest proportion of respondents were aged between 31 and 40. The yearly rate of participation was an average of 5.96 (SD=8.52) times, and each year 2-4 times was the highest proportion (Table 3).

**Table 03.** Analysis of participants' demographics and participation behaviours N=1556

Variable	Category	Frequency	Percentage
Gender	Male	948	60.9%
	Female	608	39.1%
Age Group M=35.63 SD=10.68	20 years old & below	92	5.9%
	21-30 years old	459	29.5%
	31-40 years old	529	34.0%
	41-50 years old	312	20.1%
	51 years old & over	164	10.5%
Yearly Rate of Participation M=5.96 SD=8.52	1 time /year	331	21.3%
	2-4 times /year	575	37.0%
	5-10 times /year	444	28.5%
	11-20 times /year	158	10.2%
	21 times & over	48	3.1%

## 5.3. Instrumentation

The questionnaire consisted of eight sections: Participation Motivations Scale, Past Experiences Scale, Destination Image Scale, Event Image Scale, Satisfaction Scale, Intention Scale, Revisiting behaviour Scale and Demographics Scale. The development of the questionnaire was based on relevant literature regarding participation motivations (Agrusa, et al., 2011), past experiences (Kaplanidou & Gibson, 2010), destination image (Agapito, Valle, & Mendes, 2013; Papadimitriou, Apostolopoulou, & Kaplanidou, 2015), event image (Hallmann, Kaplanidou, & Breuer, 2010), event satisfaction (Goh, 2015; Papadimitriou et al., 2015), intention (Koo et al., 2014; Papadimitriou et al., 2015) and revisiting behaviour (Julaimi & Talib, 2016; Kaplanidou & Vogt, 2010). The Demographics Scale includes gender, age, education level, occupation, monthly income and participation rate in road race events over the past year. Analysis of the six scales revealed that: (1) the critical ratio values and total correlation coefficients for each item reached a significant level, showing discrimination in the construction of the scale; (2) factor analysis showed that the total cumulative reading of the six scales explained 76.04–83.59% of the variance, illustrating that all research instruments had construct validity; (3) reliability analysis showed that the Cronbach's alpha coefficients for each scale was above .90, suggesting that the internal consistency was acceptable (Chiou, 2010). The above three scales demonstrated sound discrimination, validity, and reliability, and that are suited to measure participants' opinions regarding participation behaviours in road race events (Liu, Huang, Kuo, & Chen, 2016).

## 5.4. Data Analysis

SPSS version 17.0 was used to provide descriptive statistical analysis of participants' demographics and participation behaviours. The cluster analysis was used to analyse the segregation groups to compare the effectiveness of segmentation variables and to analyse the effectiveness of the segmentation groups.

The discriminant analysis and chi-square tests were used to compare the differences in the demographics of participants of road race events between different groups segments.

## 6. Findings

### 6.1. Analysis of the Types of Road Race Events

As shown in Table 1, the average rate of participation in road race events per year as reported by participants is 5.96 (SD=8.52). Regarding the types of road race events (Table 2), the one with the highest percentage is half marathon (24.57%), followed by marathon (16.82%), 6-10 km (17.25%), 11-20 km (13.29%), 5 km or less (11.88%), ultra-marathon (8.31%) and triathlon (7.88%). The analysis shows that participants favour half marathons, 6-10 km and marathons.

**Table 04.** Summary of the types of road race events N=1556

Types of Road Race Events	n	%	M*	SD
Ultra-Marathon	330	8.31	.91	2.12
Marathon	668	16.82	4.50	8.88
Half Marathon	976	24.57	3.45	4.31
11-20 km	528	13.29	1.50	2.38
6-10 km	685	17.25	1.79	2.53
5 km or less	472	11.88	1.31	2.96
Triathlon	313	7.88	.62	1.43

\*M is the average participation number for each type of road race.

### 6.2. Cluster Analysis of Demographic Variables and Participation Behaviour of Road Race Events Participants

In the case of unknown clusters, eleven variables, such as demographic variables (gender, age, income and participation rate) and participation behaviour (motivations, past experiences, destination image, event image, satisfaction, intention and revisiting behaviour) were used as input variables. Using a two-step cluster analysis, the distribution of dendrograms was used to roughly estimate the clusters as three clusters; subsequently, the K-mean clustering method divided the data and determined that the three clusters were suitable for differentiation. The numbers of sample distributions of the three clusters were “cluster 1” 742 (47.7%), “cluster 2” 551 (35.4%), and “cluster 3” 263 (16.9%). In accordance with the importance ranking of input forecasters in the two-step cluster analysis, the most important segmentation variables were: gender, participation intention, revisiting behaviour and satisfaction.

In this study, based on cluster analysis results, that cluster variable is the standardized score of the variable (the average is 0 and the standard deviation is 1), so the “final cluster centres” of each cluster will may be negative, and it can see the difference of the average of the three clusters. It can be used as a basis for cluster naming. From Table 6, we can see that the higher values for “cluster 1” road race events participants are: motivations, past experiences, destination image, event image, satisfaction, intention and revisiting behaviour. “Cluster 1” participants have higher participation experience for road races events and the males account for 99.6% of participants. Therefore, they were named the “Male High Experience Group”. The “cluster 2” participating experiences for road race events are also relatively high, and the female ratio is 86.8%. Therefore, they were named the “Female High Experience Group”. The value of

"cluster 3" for road race events is low to medium, however, the male and female ratios were 51.7% and 48.3%, respectively. Consequently, they were named the "Middle and Low Experience Group".

**Table 05.** Summary of cluster analysis of demographic variables and participation behaviour, N=1556

Cluster	Cluster 1	Cluster 2	Cluster 3
<b>Input</b>			
Gender	Male (99.6%)	Female (86.8%)	Male (51.7%)
Intention	6.15	6.10	4.66
Revisiting behaviour	6.14	6.09	4.55
Satisfaction	6.02	6.04	4.76
Event image	5.78	5.83	4.56
Destination Image	5.88	5.89	4.69
Past Experiences	5.65	5.48	4.11
Motivations	5.86	5.85	4.95
Monthly Income	NTD 40,000-59,999 (38.1%)	NTD 20,000-39,999 (38.7%)	NTD 20,000-39,999 (38.0%)
Participate Rate/Year	5-10 times (34.8%)	2-4 times (50.5%)	1 time or less (47.5%)
Age	31-40 (41.0%)	31-40 (32.7%)	21-30 (52.1%)

**Note:** **Class variables** include gender, age, income, and participation rate; **Continuous variables** include motivations, past experiences, destination image, event image, satisfaction, intention and revisiting behaviour on a seven-point Likert scale (7 = strongly agree, 1 = strongly disagree).

**Table 06.** Comparison of cluster centre points of cluster analysis of road race participants

Cluster	cluster 1	cluster 2	cluster 3
<b>Factor Dimensions</b>			
Participation Motivations	.2038	.1907	-.9747
Past Experiences	.3018	.1424	-1.1496
Event Image	.2142	.2818	-1.1949
Destination Image	.2372	.2471	-1.1870
Event Satisfaction	.2427	.2612	-1.2320
Participation Intention	.3140	.2494	-1.4085
Revisiting behaviour	.3022	.2516	-1.3799

**Note:** This cluster variable is the Z score of the variables (the average is 0 and the standard deviation is 1), and the "final cluster centres" can see the difference of the average of the three clusters.

### 6.3. Confirming the Effectiveness of Discriminant Analysis of Segmentation Cluster of Road Race Events Participants

To confirm that it is appropriate to segment participants of the road race events into 3 clusters, this study further used discriminant analysis to confirm the correctness of the cluster results. The analysis results in Table 5 show that there are actually 742 people in the "Male and High Experience Group"; as 728 people were correctly predicted to belong to this cluster, the correct prediction rate was 98.1%. In the "Female and High Experience Group", the total number of people are 551; as 469 people were predicted to belong to this cluster, the correct prediction rate was 85.1%. In the "Middle and Low Experience Group", there are 263 people; as 223 people were predicted to belong to this cluster, the correct prediction rate was 84.8%. The percentage of overall correct results of above discriminant analysis was 91.3% ((728+469+223)/1556). Since the chi-square value reached a significant level of .05 ( $\chi^2=2349.5>5.99$ ), the result of this discriminant analysis was significantly higher than that of random classification results.

**Table 07.** Summary of the effectiveness of discriminant analysis of segmentation clusters

Numbers of cluster observations			Members of predicted clusters			Total
			Male and High Experience	Female and High Experience	Middle and Low Experience	
Original	N	Cluster1	728.0	3.0	11.0	742.0
		Cluster2	70.0	469.0	12.0	551.0
		Cluster3	13.0	27.0	223.0	263.0
	%	Cluster1	98.1	.4	1.5	100.0
		Cluster2	12.7	85.1	2.2	100.0
		Cluster3	4.9	10.3	84.8	100.0

\* 91.3% of the original group observations have been correctly discriminant predicted.

#### 6.4. Comparing the Differences in Demographic Statistics and Segmentation Analysis of Road Race Events Participants

In order to understand the differences between the three clusters and demographic variables of the “Male and High Experience Group”, “Female and High Experience Group”, and “Middle and Low Experience Group” of road race participants, this study conducted a cross-analysis and a chi-square test on gender, age, educational level, occupation, income and participation rate. The results are presented in Table 7. From the above analysis results, it can be seen that demographic variables of road race events participants are significantly different from those of the segmentation clusters ( $\chi^2=25.8$ , P- value<.001  $\sim \chi^2=1001.6$ , P-value<.000). Therefore, participants showing different demographic segmentation of road races have significant differences in the cluster segmentation (Wu, 2008).

**Table 08.** Summary of the differences in demographic statistics and segmentation analysis

Demographics	Category	Male and High Experience	Female and High Experience	Middle and Low Experience	$\chi^2$	P value
Gender	Male	78.0%	7.7%	14.3%	1001.6	.000
	Female	0.5%	78.6%	20.9%		
Age Group	<20 Years old	0.0%	63.0%	37.0%	232.3	.000
	21-30 Years old	31.6%	38.6%	29.8%		
	31-40 Years old	57.5%	34.0%	8.5%		
	41-50 Years old	59.0%	30.8%	10.3%		
	>51 Years old	66.5%	24.4%	9.1%		
Education Level	Middle School	63.3%	28.6%	8.2%	25.8	.001
	High School	51.6%	36.7%	11.7%		
	College	48.3%	38.7%	13.0%		
	University	43.1%	36.2%	20.7%		
	Institute	51.9%	30.8%	17.3%		
Occupation	Agribusiness	50.0%	29.2%	20.8%	319.0	.000
	Officer & Educator	64.2%	24.9%	10.9%		
	Service Industry	43.9%	41.1%	15.0%		
	Students	5.3%	54.8%	39.9%		
	Family Manager	5.1%	64.1%	30.8%		
	Retirees	85.7%	4.8%	9.5%		
	Freelance	59.6%	21.1%	19.3%		
Monthly Income	Others	48.3%	40.4%	11.2%	345.6	.000
	NTD 19,999>	3.4%	60.1%	36.5%		
	NTD 20,000-39,999	42.5%	39.2%	18.4%		
	NTD 40,000-59,999	61.9%	27.1%	10.9%		
	NTD 60,000-79,999	74.2%	19.9%	5.9%		
Participate Rate	> NTD 80,000	76.4%	17.9%	5.7%	235.9	.000
	1 time or less	31.4%	30.8%	37.8%		
	2-4 times	39.5%	48.3%	12.2%		
	5-10 times	58.1%	30.6%	11.3%		
	11-20 times	69.0%	20.3%	10.8%		
	>21 times	91.7%	6.3%	2.1%		

The above results are similar to those of previous studies that indicated gender, age, education, occupation, and income are the main demographic variables influencing participation behaviour of road race events or sports tourism; moreover, they confirm that men are more likely to participate in such events than women (Liu, 2016; Liu & Lee, 2011). Second, the participation behaviour of road race events or sports tourism are influenced by satisfaction (Hallmann et al., 2010; Koo et al., 2014; Oshimi & Harada, 2016), participation intention (Julaimi & Talib, 2016; Basaran, 2016; Jin et al., 2013; Papadimitriou et al., 2015) and revisiting behaviour (Agapito et al., 2013; Basaran, 2016; Julaimi & Talib, 2016; Kaplanidou & Gibson, 2010).

However, most studies that include a participants' segmentation analysis in sport activities are based on demographic variables and sports participation motivation, behaviour or attitude (Australian Sports Commission, 2012, 2013; Chao, Wu, Lin, & Wang, 2013; Chen & Huang, 2014). In the study of cluster segmentation on road race (marathon) participants, most of the studies were analysed using demographic variables or participation motivation or training characteristics or individual and social aspect. Ogles and Masters (2003) conducted a cluster analysis based on a motivational profile and demographic and training characteristics of 1519 marathon runners, which yielded 5 definable subgroups: running enthusiasts, lifestyle managers, personal goal achievers, personal accomplishees, and competitive achievers. Vos et al. (2008) conducted a study where 'runner identity', 'health/wellness', 'social aspect of running', and 'ease of individual participation' served as input for the cluster analysis; consequently, five groups could be distinguished: 'traditional/generic runners'(35.2%), 'social competitive runners'(14.5%), 'individual fitness runners'(12.2%), 'individual competitive runner' (24.9%), and 'companionship runners' (13.2%).

Based on the above analysis, it is evident that past cluster analyses of road race events (marathon) participants have taken participants' motivation, training characteristics, or individual and social aspects as input variables. Therefore, personal motivations and attitudes have become the main key factors; personal motives were endorsed most often across all groups. This study mainly used demographic variables (such as gender, age, income or participation rate) and participation process factors (motivation, past experiences, event imagery, destination imagery, event satisfaction, participation intention and revisiting behaviour) as input variables; consequently, this is the main difference between this study and past research.

## **7. Conclusion**

Based on the purpose of the study, the results of the data analysis, and the consideration of relevant literature, this study has devised a series of recommendations relevant for both theoretical and practical application of road race management and marketing.

### **7.1. Road Race Participants Cluster Segmentation**

From the results of the research and analysis, it can be found that the demographic variables (gender, age, income, and participant rate) and participant behaviours (participation motivation, past experiences, destination image, event image, event satisfaction, participation intention, and revisiting behaviour) of road race events in Taiwan could be the basis for cluster segmentation. Based on these dimensions, three clusters could be identified: "Male and High Experience Group", "Female and High Experience Group", and "Middle and Low Experience Group". This study further used discriminant analysis to confirm the

correctness of the cluster results; the percentage of overall correct results of above discriminant analysis was 91.3% and the chi-square value reached a significant level. The result of this discriminant analysis was significantly higher than that of random classification results. In addition, this study conducted a cross-analysis and a chi-square test on demographic variables among three clusters; the results are significantly different from those of the segmentation clusters. Therefore, demographic variables and participation behaviour can be applied as the basis for market segmentation with regard to participants of road race events in Taiwan.

## 7.2. Recommendations

The following recommendations have been devised to assist the hosting city, organizers, sports associations and running clubs to provide products that meet needs of road race participants, as well as increase their participation and loyalty. **First**, the event and destination imagery of road race events are key factors affecting satisfaction. Consequently, it is necessary to enhance the quality of the event, including the atmosphere and characteristics, to improve event satisfaction. **Second**, past experiences, destination image, and participation motivation are key factors affecting the participation intention and revisiting behaviour of the road race events. The organizers and the host city must consider allowing participants to accumulate emotional awareness, strengthen destination characteristics, meet participants' needs, and arouse participants' goal orientation and drive of motivation; such measures will have a positive impact on intention and revisiting behaviour of road race events. It is important for host cities to consider promoting local accommodation, transportation, restaurants, and attractions. Offering well-trained staff or volunteers to assist participants with all aspects of their stay in the host city will help to foster a positive destination image, improve event satisfaction and participation experience, and improve revisiting behaviour (Goh, 2015; Hallmann et al., 2010; Jin et al., 2013).

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