

# PREDICTORS AND OUTCOMES OF SPORT EVENT EXPERIENTIAL VALUE: INSIGHTS FROM FORMULA ONE PETRONAS MALAYSIA GRAND PRIX

Rosidah Musa, Faculty of Business Management, Universiti Teknologi MARA, Malaysia  
Rezian-na Muhammad Kassim, Universiti Teknologi MARA, Malaysia

## ABSTRACT

*Value creation for customers in the form of experiences has been gaining attention remarkably. Great customer experiences could fuel surprising “wow” moments of truth, or perhaps magic moment. In fact, customer experience is destined to act as the tool for differentiation strategy. Quality products and services are no longer sufficient for business sustainability, for customers need to bestow upon with satisfactory experiences that they valued. Research stream on experiential value is sparse; hence, this paper aims to fill the void by conducting an empirical investigation on predictors of sport event experiential value and in turn, assessing its impacts on total experience and loyalty. Distribution of the survey instrument at the vicinity of the Formula 1 Sepang International Circuit resulted in 225 usable feedbacks. Structural equation modeling procedure was employed to test the hypothesized linkages in the proposed research model. Evidence established that all the hypothesized linkages were supported. A discussion of the implications for future research directions and sports events organizers were deliberated.*

**JEL:** MO, M3, M30, M31

**KEYWORDS:** Experiential value, Formula 1, Involvement, Sport Orientation

## INTRODUCTION

In today's commoditized economy, marketers realized that products, prices, people and technology are becomingly similar. A potentially significant alternative strategy that could attract consumers' attention must go beyond a product's functional features, benefits and quality and offer instead, a customer experience. It is predicted that customer experience is the next competitive battleground for business success and unsurprisingly, it has been described as the next business tsunami (Colin and Ivens, 2005). Indeed, it has not only emerged as one of the hottest topics amongst top management but is also becoming an uppermost-prioritized research area in accordance with the customer-orientation philosophy (Mascarenhas, Kesavan and Bernacchi, 2006). Although Pine and Gilmore first introduced the concept in 1998, customer experience has eventually played a prime role in determining the winners and losers in years to come. However, identifying factors that drive the experience that customer valued most remains today's key challenging and critical management issues. Colin and Ivens (2005) postulate that customer experience comprises of two elements: physical and emotional aspects and research have unveiled that emotions are the one often being disregarded in the business practices. Recent study has found that these emotions are one of the key differentiators to evoke customers' attention (Mascarenhas et al., 2006).

Regardless of the fact that customers' experience plays a critical role in many contemporary discussions among business practitioners and academics scholar, there has been conspicuously few empirical investigations on this emerging concept with notably exception of the seminal work by Mathwick et al., (2006). Against this backdrop, this paper attempts to fill this void with an empirical examination on the core predictors of Sport Event Experiential Value (hereafter called SEEV) and its impacts on total experience and in turn spectators' loyalty. In order to accomplish this objective, valid and reliable

multidimensional measures have to be established and validated as suggested by Churchill (1979), Gerbing and Anderson (1988) and Ping (2004). Ultimately, the research's primary goal is to develop and validate a plausible model that could be characterized as having statistical and explanatory power to exemplify the factors that determine the focal construct, SEEV and subsequently predict its consequences within a motor sport event environment.

The motor sport event environment in this context refers to the prestigious world of Formula 1 (hereafter called F1). This event has the ability to stimulate feelings of excitement, which rush the adrenalin of the spectators. The industry analysts from Formula Money, Deloitte Sports Business Group, a Britain based sports business specialist reported that F1's global revenues stood at US\$3.9 billion. This has made F1 the world's highest revenue-generating sports event of the year (StarBizweek, 2009) The amount comprised of commercial rights' revenues such as race sponsorship, corporate hospitality and broadcasts fees; team revenues which include sponsorships and contributions from partners and owners and circuit revenues from ticket sales and sponsorships. The benefits of F1 are abundant and are not only confined to track revenues. In fact, hosting F1 event has also contributed generously to a country's tourism and hospitality sector. Malaysia is second in Asia after Japan to have a F1 track and has remained a value for money destination for many Europeans, who made up the bulk of international audiences at F1 PETRONAS Malaysian Grand Prix (Mahalingam, 2009). F1 is currently the third most watched live sporting event, second to Olympics and the World Cup.

The following section will review and synthesize relevant literature and follows by the research methodology. The empirical results section delineates the respondents' demographic profile; consequently, the findings from exploratory factor analysis, confirmatory factor analysis and structural model analysis are discussed. The last section will discuss on the implications of the research findings.

## **LITERATURE REVIEW**

This section highlights the relevant literature in relation to sport involvement, sport orientation, sport event experiential value (SEEV), spectators' total experience and spectators' loyalty. Examining and synthesizing gaps within the literature review subsequently lead toward the conceptualization of these identified constructs and development of hypotheses, which will be deliberated below:

### Sport Involvement

Peter and Olsen (1987) assert that level of involvement is a critical determinant of experiential value, which subsequently affect an individual's behavior. Research indicates that highly involved consumers of sport tend to consume sport activities through event attendance more than those who are not as involved (Stone, 1984). Furthermore, evidence suggests that many individuals attending action-sporting events are involved with action sports (Bennett and McColl-Kennedy, 2005). Involvement reflects the degree to which people devote themselves to an activity or event (Peter and Olson, (1987). Building from the existing literature, this study extends the multi-dimensional view of the most commonly used instrument adapted from consumer involvement profile (CIP) scale developed by Havitz and Mannel (2005). They suggest CIP comprises three dimensions: attraction, centrality and self-expression, which have been shown to be consistently applicable and reliably measured within leisure settings.

### Sport Orientation

In the multi-billion dollar sports industry, event organizations must incessantly assess how to meet or exceed consumer orientation and experience (Kang and James, 2004). Pons, Mourali and Nyeck (2005)

and Wann (1995) define sport orientation as an individual's specific motives or inherent predisposition toward attending or participating in sports events. Manifestation of sport orientation could be reflected through the spectators' behaviors; it is often conjectured to be closely associated with enduring involvement (Pons et al., 2005). For example, an individual might participate in a sporting event for the purpose of group affiliation; which is viewed in marketing literature as the core driver in explaining 'high levels of fan involvement (Wann, 1995). Additionally, Pons et al., (2005) conjecture that the common behavior, sign and values will be shared and displayed conspicuously among the group members not only based on the choice of sport event selected, but also exhibited through the evaluation of their experiences derived from the sport events. Most prior studies in this research stream focused on sport orientation from the perspective of athletes, with a notable exception of Greenwell,

Fink and Pastore (2002), who examined the impact of goal orientation on the satisfaction of sport event from the lenses of the spectators. Recently, Pons et al. (2005) developed a reliable instrument to measure the concept of orientation towards sporting event (OSE). They unveiled that OSE consists of three core dimensions, which are sensation, cognition and socialization seeking orientation towards sport event. Since then, it was noted that no study has adapted or adopted their scale to validate its generalizability in other sport events or test its applicability within the cross-nation context. What more to integrate OSE in a research framework in the mega-sporting event, such as F1 Grand Prix, which has racing circuits in nineteen countries. Following the above rationale, it inspires the authors to propose the following hypothesis:

*H1: Sport involvement has a positive effect on sport orientation.*

#### Sport Event Experiential Value (SEEV)

Sheth, Newman and Gross (1991) have indicated that values driving individuals' consumption behaviour has been attributed to functional, conditional, social, emotional and epistemic utility. Customers of today are seeking more value, choices, and subsequently, richer customer experience. In retailing, recent empirical research findings by Keng, Huang, Zheng and Hsu (2007) and Mathwick et al., (2002) have highlighted on the critical role of service experience. They suggest that retailers should focus on creating theatrical retailing environment involving fun, excitement and entertainment, as well as encouraging shoppers to engage actively in the retailing activities. In sports marketing, such an experiential value concept developed by Holbrook (1994) is being applied, and it relates to personal interaction and physical environmental encounters within the sport event environment.

Indeed, Holbrook and Hirschman (1982) point out the significant role of the multi-sensory, imaginary, and emotional aspects of consumption experience in advancing the knowledge of consumer behavior. The tangible physical environment plays a pivotal role in stimulating excitement in sport event settings and the excitement in turn, influences spectator loyalty (Musa, Putit and Kassim, 2009; Wakefield and Blodgett, 1999). Hence, in this research context, SEEV is conceptualized as the value proposition offered by event organizer in terms of the service, atmospherics condition in the vicinity of the circuit, entertainment value, social engagement opportunity, enjoyment and also the value of money acquired when attending this event. Bitner and Brown (2000) assert that level of experience value might influence customer satisfaction, and loyalty. Following the above, it is plausible to put forward the next two hypotheses as identified below:

*H2: Sport involvement has a positive effect on sport event experiential value.*

*H3: Sports orientation has a positive influence on sport event experiential value.*

### Spectators' Total Experience (STE)

Total customer experiences are the key driver in generating lasting customer loyalty in today's businesses (Mascarenhas et al., 2006). In sports marketing, STE can be translated into the overall experiences of spectators with regards to the set of integrated products and services available when attending any sports-related events. Spectators' total experience is conceptualized as fulfilling physical and emotional experience when spectators attend a sport event as well as interacting with event organizer. The positive experience might influence spectators' loyalty (Mascarenhas et al., 2006). Russell and Pratt (1980) assert that emotions consist of two independent dimensions: pleasure and arousal. Pleasure refers to the level at which a person feels well, happy or content in a situation, while arousal refers to the extent to which a person feels stimulated and active. Past research accentuate the established relationship between pleasure and arousal when attending the event (Mano and Oliver, 1993; Musa, et al., 2009; Westbrook, 1987 and Westbrook and Oliver, 1991). It was unravelled that the more pleasure the subjects experienced during the event, the higher will be their loyalty. Hence, we postulate that:

*H4: SEEV has a positive effect on spectators' total experience*

### Spectators' Loyalty

Sport event attendance is considered very critical in generating revenue as well as significant contribution to the economy for the host cities and countries (Hall, O'Mahony and Vieceli, 2010). Undoubtedly, high attendance sporting events could attract bigger corporate sponsorships (Halls, et al., 2010). Event organizers have to identify the key factors that influence sports events attendance and unearth the drivers that contribute to spectators' loyalty towards the sports events. In essence, high attendance of spectators to sports events is pertinent for the viability and sustainability of the events. Zeithaml, Berry and Parasuraman (1996) postulate that acquiring customer loyalty would give sellers more competitive protection and greater control in devising and planning marketing programs.

They assert that favorable behavioral intentions are manifested through customers propensity to recommend and advocate positive word of mouth and remain loyal by repatronizing the service provider frequently. Creating value for customers beyond the products or services will ultimately enhance loyalty and increase tolerance to pay higher price and spend more (Smith and Wheeler, 2002). Oliver (1999) suggest that a customer's loyalty must be measured further by analyzing his or her beliefs, affects and experience. In this research context, loyalty is seen as behavioural in nature, which reflects loyalty in terms of revealed purchase and usage behavior that is normally based on customer satisfaction and measured by past purchasing of one's brand and/or competing brand (Mascarenhas et al., 2006). It is important to note that customer satisfaction is not included in the research framework because spectators' total experience construct has captured it as an indicator of pleasure. In sports marketing setting, loyalty is conceptualized as spectators' probable inclination to attend the events again in future and advocate positive word-of-mouth, prompting the authors to postulate the following hypotheses:

*H5: SEEV has a positive influence on spectators' sport loyalty.*

*H6: Spectators' total experience has a positive effect on sport loyalty.*

In view of the significance of the research context, the proposed research model is considered novel as it attempts to explore the predictors of SEEV and in turn, its effect on spectators' total experience and ultimately spectators' loyalty. The research model and hypothesized linkages are graphically illustrated in Figure 1.

Figure 1: The Research Model and Hypothesized Linkages

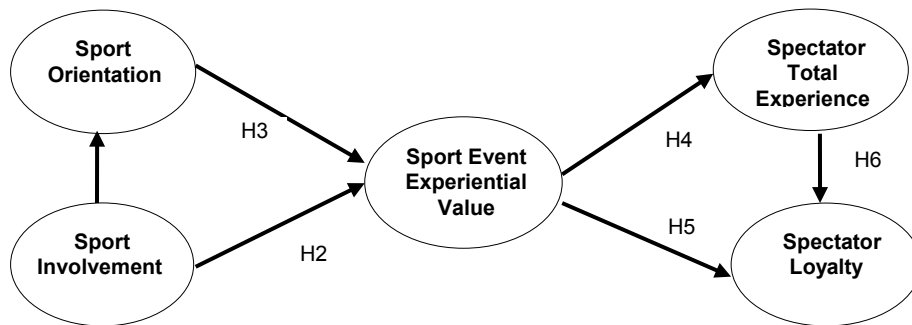


Figure 1 depicts a structural model which integrates two predictors of SEEV (Sport orientation and Sport involvement) and two outcomes (Spectator Total Experience and Spectator Loyalty). The plausibility of the model will be tested using Structural equation modeling procedure.

## RESEARCH METHODOLOGY

Some 350 questionnaires forms were distributed to F1 sports spectators during Formula 1 PETRONAS Malaysian Grand Prix 2010 at Sepang International Circuit in Malaysia. Researchers personally administered data collection by intercepting potential respondents within the circuit's vicinity. During this exercise, the researchers approached respondents to elicit interest in survey participation and explained the research objectives. The researchers remained in the vicinity until respondents had completed the survey and interact with them only at a time where and if any minor clarification was needed. Respondents were given approximately fifteen minutes to complete it.

Upon completion, the respondents were given souvenirs as a token of appreciation of their voluntary participation. This data collection technique has resulted in 225 usable survey questionnaires for data analyses. A seven-point Likert scale has been employed for all the measures used in the study except demographics profile and travel behavior sections. The measures were mainly adapted from previous research such as Keng et al., (2007), Mathwick et al., (2002) and Pons et al., (2005). The data were initially assessed to detect outliers and normality then descriptive analyses were performed. Subsequently, data were analyzed to determine the goodness of data in terms of reliability and validity by following guidelines offered by Anderson and Gerbing (1988) and Gerbing and Anderson (1988).

## RESULTS AND DISCUSSIONS

### Demographics Profile of Respondents

Table 1 presents the respondents profile: 74.2% were male, the majority of which fall in the age category of 21 to 40 years (83.1 percent). Interestingly, high proportion of the sample comprises of international spectators (66.2 percent) of which 39% were European, and 77.4 percent has attained tertiary education.

### Exploratory Factor Analysis (EFA)

Three exploratory factor analyses (EFA) were conducted separately on SEEV (Table 2), Sport Orientation (Table 3) and Sport Involvement, Spectators' Total Experience, and Spectators' Loyalty (Table 4). The EFA used principal components extraction with varimax rotation. It is the most commonly used analytical technique for reducing a large item pool to a more manageable set. It has been recognized to be a valuable preliminary analysis when no sufficient theory is available to establish the underlying dimensions of a specific construct (Sharma, 1996). Table II shows the results of EFA for SEEV.

Table 1: Respondents’ Demographic Profile

| Variable                     | Description  | Frequency | Percentage |
|------------------------------|--|-----------|------------|
| Gender                       | Male   | 167       | 74.2%      |
|                              | Female   | 58        | 25.8%      |
| Age                          | < 20 years old                                     | 15        | 6.7%       |
|                              | 21 – 30 years old                                  | 117       | 52.0%      |
|                              | 31 – 40 years old                                  | 70        | 31.1%      |
|                              | 41 – 50 years old                                  | 21        | 9.3%       |
|                              | 51 – 60 years old                                  | 2         | 0.9%       |
| Highest Academic Achievement | High School  | 51        | 22.7%      |
|                              | Undergraduate                                      | 121       | 53.8%      |
|                              | Post graduate                                      | 53        | 23.6%      |
| Nationality                  | Malaysian  | 76        | 33.8%      |
|                              | ASEAN (Indonesian, Brunei, Singapore and Thailand) | 31        | 13.8%      |
|                              | European   | 58        | 25.8%      |
|                              | North & South America                              | 13        | 5.8%       |
|                              | Africa   | 12        | 5.3%       |
|                              | Australia/New Zealand                              | 12        | 5.3%       |
|                              | Far East (China /Japan/Korea/ Taiwan)              | 23        | 10.2%      |

*This table shows the breakdown of respondents’ profile based on gender, age distribution, academic achievement and nationality*

In assessing the initial factor structure of SEEV, all the 32 items were analyzed using EFA. It displays the result for both Bartlett test of sphericity ( $\chi^2$  of 4520.82,  $df = 231$  at  $p = 0.001$ ) and the Kaiser-Mayer-Olkin measure of sampling adequacy (KMO = 0.94). This indicates that there are sufficient inter-item correlations with the data for performing factor analysis. Sharma (1996) suggests that the cut-off level for the KMO statistic should be greater than 0.8, but a value of 0.6 is tolerable. A six-factor solution was extracted; however, this initial purification exercise resulted in deletion of 10 items because of failing to fulfill the above-mentioned criteria. In summary, the results reveal that SEEV construct comprises of six factors, which are labeled as esteem/escapism, entertainment, economy (customers’ return on investment), social, service and aesthetics.

Table 2: Final Exploratory Factor Analysis for Sport Event Experiential Value (SEEV)

| Sport Event Experiential Value Items  | F1   | F2   | F3   | F4   | F5   | F6   |
|---|------|------|------|------|------|------|
| 1 The F1 circuit is aesthetically appealing   |      | 0.73 |      |      |      |      |
| 2 The motor exhibition displays products attractively                                 |      | 0.82 |      |      |      |      |
| 3 The signage and electronic board at F1 Grand Prix is visually eye-catching          |      | 0.73 |      |      |      |      |
| 4 The layout design of the F1 circuit makes it easy to get around                     |      | 0.65 |      |      |      |      |
| 5 Overall, the atmosphere at F1 Grand Prix circuit is stimulating                     |      | 0.61 |      |      |      |      |
| 6 F1 provides great entertainment   |      |      | 0.69 |      |      |      |
| 7 F1 is a fun way to spend time   |      |      | 0.73 |      |      |      |
| 8 Attending F1 is fun   |      |      | 0.82 |      |      |      |
| 9 When I think of F1, I think of excellence event                                     |      |      | 0.73 |      |      |      |
| 10 F1 Grand Prix staff are responsive on request                                      |      |      |      |      |      | 0.72 |
| 11 F1 Grand Prix at staff are knowledgeable   |      |      |      |      |      | 0.69 |
| 12 F1 event is an opportunity to make friends with people who share the same interest |      |      |      |      | 0.67 |      |
| 13 Attending F1 with my friend or family is a bonding experience                      |      |      |      |      | 0.75 |      |
| 14 I got my money's worth for attending F1  |      |      |      | 0.67 |      |      |
| 15 I am happy with F1 price ticket  |      |      |      | 0.84 |      |      |
| 16 Overall I feel F1 ticket is of a good economic value                               |      |      |      | 0.80 |      |      |
| 17 The thrill of F1 performance "gets me away from it all"                            | 0.67 |      |      |      |      |      |
| 18 The excitement of F1 makes me forget my problems                                   | 0.70 |      |      |      |      |      |
| 19 My friend would think highly of me if I attend F1 event                            | 0.79 |      |      |      |      |      |
| 20 My social status will be enhanced when I attend F1 event                           | 0.76 |      |      |      |      |      |
| 21 F1 is a prestigious event  | 0.61 |      |      |      |      |      |
| 22 I feel proud attending F1 event  | 0.67 |      |      |      |      |      |

*This table shows that Sport Event Experiential Value construct consists of six factors namely: F1 (esteem/escapism); F2 (aesthetics); F3 (entertainment); F4 (economy); F5 (social) and F6 (service.)*

Table 3 demonstrates the results of the second EFA. Two factors emerged from 14 items, which contravene expected outcome of three factors. It was noted that all items (4) to represent the third expected factor, which is social seeking sport orientation, did not converge into the third factor, and the items fall into sensation factor with high cross loading with cognition seeking orientation. The result reveals that the KMO statistic of sampling adequacy was 0.87. However, this initial purification exercise resulted in deletion of eight items based on high cross-loadings (greater than 0.40) on multiple factors. This result implies that sport orientation comprises of two factor structures, which are sensation seeking and cognition seeking.

Table 4 depicts the third EFA results, which illustrates that there is three factor-structure emerged from these three constructs: sport involvement, spectators' total experience and spectators' loyalty, totaling 25 items. The result reveals an adequate sampling adequacy based on the KMO statistical value of 0.95. The initial purification exercise resulted in deletion of one item in sport loyalty construct based on high cross loadings (greater than 0.40) on multiple factors.

Table 3: Final Exploratory Factor Analysis for Sport Orientation

| Sport Orientation Items   | Sensation Seeking | Cognition Seeking |
|---|-------------------|-------------------|
| 1. attending sport event is real pleasure                       | 0.81              |                   |
| 2. always excited when going to this sport event                | 0.90              |                   |
| 3. always enthusiastic when thinking about attending this event | 0.86              |                   |
| 4. attending this sport event, I feel part of the event         | 0.80              |                   |
| 5. happy when I can attend this event                           | 0.78              |                   |
| 6. consider myself as a motor sport expert                      |                   | 0.82              |
| 7. can talk about tactic and strategies like a professional     |                   | 0.87              |
| 8. I know very little about motor sports                        |                   | 0.70              |

*This table demonstrates that Sport Orientation construct is comprises of two factors/dimensions that are sensation seeking and cognition seeking.*

### Confirmatory Factor Analysis

As argued by Gerbing and Anderson (1988) item-total correlation, alpha coefficient and exploratory factor analysis procedures could not ensure unidimensionality of measures, which is viewed as an important requirement of valid measurement. They strongly recommend that a more rigorous statistical procedure be employed to refine and confirm the factor structure generated from the initial EFA. Confirmatory factor analysis (CFA) has been proposed as an analytical tool to ascertain unidimensionality of measures (Gerbing and Anderson, 1988). Hence, in line with this suggestion, all the resulting measures derived from EFA were validated using a CFA analytic procedure by employing the AMOS 18 analytical program. In order to achieve an acceptable ratio of observations to estimate parameters, it is essential to run three separate measurement models; the fit indices suggest that these models fit the data well. The first measurement model consists of SEEV construct of six-factor solution.

The results of the first measurement model are as follows: the fit statistics were  $\chi^2 = 468.64$ ,  $df = 194$ ,  $\chi^2/df = 2.41$ ,  $p < 0.001$ ; RMR = 0.079; IFI = 0.94; CFI = 0.94; and RMSEA = 0.08. All indicators loaded heavily on the construct and have  $t$ -values greater than 13.95 and all standardized coefficient are greater than 0.50. The second measurement model comprises of sport orientation construct with two-factor structure. The fit statistics were  $\chi^2 = 21.16$ ,  $df = 12$ ,  $\chi^2/df = 1.76$ ,  $p < .048$ ; RMR = 0.08; IFI = 0.99; CFI = 0.99; and RMSEA = 0.06. Items loaded heavily on their posited constructs and have  $t$ -values greater than 7.35 and all standardized coefficient are greater than 0.50.

Table 4: Final Exploratory Factor Analysis for Sport Involvement, Spectators Total Experience and Spectators Loyalty

| Measurement Items |  | Sport Involvement | Spectators Total Experience | Spectator Loyalty |
|-------------------|--|-------------------|-----------------------------|-------------------|
| 1                 | Interested in F1   | 0.70              |                             |                   |
| 2                 | Involvement with f1 is high                                  | 0.83              |                             |                   |
| 3                 | Expert in F1   | 0.82              |                             |                   |
| 4                 | Strong supporter of F1                                       | 0.85              |                             |                   |
| 5                 | Enioy following coverage of F1                               | 0.77              |                             |                   |
| 6                 | Well-informed about F1                                       | 0.83              |                             |                   |
| 7                 | F1 matters to me a lot                                       | 0.89              |                             |                   |
| 8                 | Enjoy discussing F1  | 0.86              |                             |                   |
| 9                 | Unhappy-happy  |                   | 0.70                        |                   |
| 10                | Unenjoyable-enjoyable  |                   | 0.74                        |                   |
| 11                | Unsatisfactory-satisfactory                                  |                   | 0.76                        |                   |
| 12                | Dull-fascinating   |                   | 0.77                        |                   |
| 13                | Not fun-fun  |                   | 0.77                        |                   |
| 14                | Boring-interesting   |                   | 0.79                        |                   |
| 15                | Unpleasant-pleasant  |                   | 0.83                        |                   |
| 16                | Terrible-delighted   |                   | 0.85                        |                   |
| 17                | Monotonous-sensational                                       |                   | 0.83                        |                   |
| 18                | Calm-excited   |                   | 0.78                        |                   |
| 19                | Unarousal-arousal  |                   | 0.78                        |                   |
| 20                | Relaxed-stimulated   |                   | 0.73                        |                   |
| 21                | Not safe-safe  |                   | 0.72                        |                   |
| 22                | Come again to F1 PETRONAS Grand Prix in the future           |                   |                             | 0.75              |
| 23                | Recommend F1 PETRONAS Grand Prix to friends/relatives        |                   |                             | 0.75              |
| 24                | Desire to attend F1Petronas Grand Prix event again in future |                   |                             | 0.75              |
| 15                | F1 PETRONAS Grand Prix is my first preference                |                   |                             | 0.66              |

The above table depicts that Sport Involvement, Spectators Total Experience and Spectators Loyalty is a one dimensional construct

The third measurement model comprises of Sport Involvement, Spectators’ Total Experience and Spectators’ Loyalty. The fit statistics were  $\chi^2 = 327.25$ ,  $df = 235$ ,  $\chi^2/df = 1.39$ ,  $p < 0.001$ ; RMR = 0.07; IFI = 0.98; CFI = 0.98; and RMSEA = 0.04). Items loaded heavily on their posited constructs and have *t*-values greater than 8.23 and all standardised coefficient are greater than 0.50. In essence, all the items in the three measurement models have achieved convergent validity. The widely accepted cut off value for factor loading is when the *t*-values are greater than  $\pm 1.96$  or  $\pm 2.58$  at 0.05 or 0.01 levels respectively and standardized factor loading of 0.5 and above as recommended by Anderson and Gerbing (1988). Construct validity was assessed in terms of convergent and discriminant validity. Convergent validity is established through high correlations between the measure of interest and other measures that are supposedly measuring the same concept (Aaker, Kumar and Day, 2007). The critical ratio (*t*-value) of the items in the three measurement models were  $\pm 1.96$  or  $\pm 2.58$  at 0.05 or 0.01 levels respectively, and standardized factor loading of 0.5 and above. Thus, the convergent validity of the constructs was upheld (Anderson and Gerbing, 1988).

Alternatively, discriminant validity can also be established through low correlations between the constructs and it is evident, when the correlation between factors was lower than 0.80 (Klein, 2005) and (Yanamandram and White, 2006). Discriminant validity is achieved as the correlation coefficients ranging from 0.53 to 0.71. For a rigorous test of discriminant validity according to Fornell and Larcker (1981), the AVE of each construct was computed and found to be greater than the squared correlation between the construct and any other constructs in the model. A complementary assessment of discriminant validity was conducted to determine whether confidence interval of ( $\pm 2$  standard errors) around the correlation estimated for each pair of constructs includes 1 (Anderson and Gerbing, 1988). The result illustrates that this criteria has been achieved satisfactorily. In conclusion, it is reasonable to claim that all the measures used in the study possess adequate psychometric properties.

Table 5 presents the summarized results of measurement models, which include correlation matrix, mean value, Cronbach’s alpha, composite reliability and Average Variance Extracted (AVE). Construct



reliability was also assessed by estimating the AVE, which reflects the overall amount of variance captured by the latent construct and Composite Reliability (CR). CR reflects the internal consistency of the construct indicators, while AVE reflects the amount of variance captured by the construct indicators (Hair, Babin and Anderson, 2010). All CR scores ranging from 0.85 – 0.93, were much higher than the recommended cut-off point of 0.7 (Olorunniwo, Hsu and Udo, 2006). Thus, each of the factors are reliably measured its respective constructs. The AVE scores ranged from 0.60 to 0.72, exceeding the recommended cut-off point of 0.5 (Fornell and Larcker, 1981). It is important to note that Cronbach's alpha, the customary index of reliability was assessed after unidimensionality of a measure has been established; this was in line with the suggestion proposed by Anderson and Gerbing (1988). A commonly used threshold value of 0.70 (Nunnally and Bernstein, 1994) was used; however (Hair, Anderson and Black, 1998) suggest that values slightly below 0.70 are acceptable if the research is regarded as exploratory.

Table 5: Correlation Matrix, Squared Correlation, Average Variance Extract, Mean Value, Square Multiple Correlation, Cronbach's Alpha and Composite Reliability

| Construct                           | F1                          | F2                          | F3                          | F4                          | F5          | Mean Score | Standard Deviation | Cronbach's Alpha | Composite Reliability |
|-------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------|------------|--------------------|------------------|-----------------------|
| Sport Involvement (F1)              | <b>0.60</b>                 |                             |                             |                             |             | 4.94       | 1.28               | 0.90             | 0.93                  |
| Sport Orientation (F2)              | 0.70<br>(0.49) <sup>a</sup> | <b>0.65</b>                 |                             |                             |             | 4.98       | 1.03               | 0.93             | 0.86                  |
| Sport Event Experiential Value (F3) | 0.71<br>(0.50) <sup>a</sup> | 0.70<br>(0.49) <sup>a</sup> | <b>0.66</b>                 |                             |             | 5.09       | 0.96               | 0.92             | 0.91                  |
| Spectators' Total Experience (F4)   | 0.55<br>(0.30) <sup>a</sup> | 0.63<br>(0.40) <sup>a</sup> | 0.71<br>(0.50) <sup>a</sup> | <b>0.68</b>                 |             | 5.59       | 1.00               | 0.96             | 0.90                  |
| Spectators' Loyalty (F5)            | 0.54<br>(0.29) <sup>a</sup> | 0.53<br>(0.28) <sup>a</sup> | 0.63<br>(0.40) <sup>a</sup> | 0.66<br>(0.44) <sup>a</sup> | <b>0.72</b> | 5.40       | 0.99               | 0.84             | 0.85                  |

The table indicates that the data used in the analysis for this study has been verified through *efa*, *cfa* and structural equation modeling to be reliable and valid. <sup>a</sup>Squared Correlation is presented in parenthesis and Average Variance Extracted (AVE) is presented on the diagonal axis

### Structural Model Analysis

Subsequently, structural equation modeling (SEM) was utilized to test the six hypothesized relationships among the constructs postulated in the proposed model (Figure 1). Because of sample size constraints, composite means were constructed for all the scales. These indices were used as new variables in the data set (Settoon, Bennett and Liden, 1996). As recommended by MacKenzie and Lutz's (1989), for latent construct with one dimension, its loading ( $\lambda$ ) is fixed to be the square root of its reliability, and the error term is set at one minus the construct reliability. The structural model has a significant  $\chi^2$  value ( $\chi^2 = 58.30$ ,  $df=32$ ,  $\chi^2/df = 1.82$ ,  $p < 0.003$ ), indicating inadequate fit of the data with the hypothesized model. This is to be expected as in practice this statistic is very sensitive to sample size (Klein, 2005 and Ullman, 2006). Hence, the other fit indices were employed (GFI = 0.96; RMR = 0.03; AGFI = 0.91; CFI = 0.99; IFI = 0.99; NFI = 0.97; RMSEA = 0.06) suggest that the model fits the data satisfactorily. Therefore, the study's objective to establish a plausible model that has statistical and explanatory power, which could permit confident interpretation of results, was thus successful. Results of the tested hypotheses are reported in Table 6.

### CONCLUSION AND IMPLICATIONS

The result in Table 6 demonstrates that all the hypothesized linkages were supported. It delineates a few key implications such as sport involvement has a significant impact on sport orientation (H1) and in turn sport involvement has a positive influence on SEEV (H2). The findings confirm that sport orientation has significant positive effect on SEEV (H3). Thus, the results established that sport involvement and sport orientation are significant predictors of SEEV and consequently, spectators' total experience (H4) and

spectators’ loyalty (H5) are outcomes of SEEV. Clearly, this study reveals that SEEV directly influence spectators’ loyalty towards F1 PETRONAS Grand Prix (see H5). Although spectators’ loyalty could also be realized via spectators’ total experience (see H6), however, spectators’ total experience has a greater impact on their loyalty as compared to SEEV. Most importantly, the research’s primary goal to develop and validate a plausible model to exemplify the factors that determine the focal construct, SEEV and its outcomes have been accomplished.

Table 6: Results of Tested Hypotheses

| Hypothesized Path |   | Standardized Coefficient | Construct Reliability (t-value) | Results   |
|-------------------|---|--------------------------|---------------------------------|-----------|
| H1                | Sport Involvement — Sport Orientation                         | 0.75                     | 9.19***                         | Supported |
| H2                | Sport Involvement — Sport Event Experiential Value            | 0.24                     | 3.34***                         | Supported |
| H3                | Sport Orientation — Sport Event Experiential Value            | 0.76                     | 8.13***                         | Supported |
| H4                | Sport Event Experiential Value — Spectators’ Total Experience | 0.73                     | 12.69***                        | Supported |
| H5                | Sport Event Experiential Value — Spectators’ Loyalty          | 0.36                     | 4.40***                         | Supported |
| H6                | Spectators’ Total Experience — Spectators’ Loyalty            | 0.47                     | 5.78***                         | Supported |

*This table depicts that all the six hypotheses posited in this study are supported by the data that comprises of a sample of 225 respondents. H3 path has the strongest effect on SEEV. Whilst Spectators’ Total Experience is of greater influence to Spectators’ Loyalty compared to SEEV. \*, \*\*, \*\*\* to indicate significance at the 10, 5 and 1 percent levels respectively*

The finding of the study accentuates that F1 management stands to gain by placing extra emphasis on enhancing SEEV, as it has a direct positive significant impact on spectators’ total experience, and ultimately sport loyalty. Thus, motor sport organizers and other related sector such as hospitality and Tourism Board could gain competitive advantage and above all business sustainability. This goal could be achieved by devoting resources to enhance and fulfill the spectators’ expected experiential value, which should be congruent with their sport orientation and underlying motives of attending the sporting events. Moreover, identifying the predictors of SEEV would enable event managers to create a delightful and memorable experience, which is critical and perhaps would provide an effective competitive weapon in the face of intense competitions from other sport events. It seems reasonable to speculate that spectators that had memorable and enjoyable experience will increase propensity of their loyalty towards F1 Grand Prix as their most preferred sporting event.

Today mega-event such as F1 becoming major revenue generating tool which entails spillover effect to local and regional economic development (Mahalingam, 2009). Therefore, it is critical that sports event organizers attract as many spectators as possible in order to gain maximum economic impact. Undeniably, building great experience require an ecosystem approach which focus on a constellation of products and services that deliver a seamless experience, and demand involvement and integration of strategy, technology and management commitment. A major criticism of the study concerns external validity as the respondents were not selected based on random sampling, but rather on convenient sampling. This sampling procedure thus may not be an accurate representation of the spectators of F1. However, it is conceivable to speculate that those who were at the vicinity of F1 circuit during the qualifying and final race days could be somehow have the interest and experience required by this study. On this argument, the results and interpretations might be generalizable, specifically in the context of motor sport events. In fact, Ferber (1977) suggests that there is no place for probability samples in basic or applied consumer research.

Furthermore, the research design of using questionnaires and statistical method of analysis is often criticized in assessing the experiential aspect of consumption. The preliminary investigation might provide rich insights by qualitative research approach, such as in-depth interviews and focus group discussion. Additionally, it is noted that another pertinent weakness of the research is pertaining to the cross-sectional research design used in this study. Longitudinal research is required to capture the dynamic nature of customer post-consumption behavior. Nevertheless, efforts to test the present model

through sagacious longitudinal research would require an enormous amount of sustained cooperation by consumers serving as key informants over time, moreover the sample attrition through time could be considerable. The limitations of the present research provide opportunities for further research direction. It may be fruitful for future research to replicate and validate all or parts of the present research model, in order to determine the robustness of the findings in other sporting event settings.

Apparently, replication and comparative cross-national studies are essential in order to examine the generalizability of the model. This research direction appears to be potentially fertile because F1 is a global motor sport event; hosted in nineteen countries with extensive global audiences. Perhaps, the evidence of the plausibility of the two pivotal links—SEEV to spectators' total experience and SEEV to spectators' loyalty—would require validation in other sports events. It is also noteworthy that future study should devote the focus on extending the present model by integrating other pertinent constructs in sporting events such as identity salience and motivation. A remarkable avenue for future research is to investigate the effect of SEEV on spectators' attachment and engagement behavior by employing longitudinal research design. Perhaps, this prospective research endeavor could impart more interesting and deeper insights to both academic and practitioners.

#### ACKNOWLEDGMENT

The authors would like to thank The Ministry of Higher Education of Malaysia (MOHE) for providing the Fundamental Research Grant Scheme (FRGS) and Universiti Teknologi MARA for assistance and facilitating this research.

#### REFERENCES

- Aaker, D. A., Kumar, V & Day, S. G. (2007), *Marketing Research*, 9th ed. New York: John Wiley & Sons.
- Anderson, G. & Gerbing, D. W (1988), "An updated paradigm for scale development incorporating unidimensionality and its assessment," *Journal of Marketing Research*, 25 (May), p. 186-192.
- Anderson, G. & Gerbing, D. W. (1988), "Structural Equation Modelling in Practice: A Review and Recommended Two-Step Approach," *Psychological Studies*, 103 (May), p. 411- 423.
- Bennett, H. C. & McColl-Kennedy, J. (2005), "Experience as a moderator of involvement and satisfaction on brand loyalty in a business-to-business setting," *Industrial Marketing Management*, 34 (April), p. 97-107.
- Bhattacharya, C. B. (1998), "When customers are members: customer retention in paid membership context," *Journal of Academy of Marketing Science*, 26 (December), p. 31- 44.
- Bitner, M. J. & S. W. Brown, S. W. (2000), "Technology infusion in service encounters", *Journal of Academy of Marketing Science*, 28 (1), p. 138-149.
- Chaudhuri, A. & Holbrook, M.B. (2001), "The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty," *Journal of Marketing*, 65(April), p. 81-93.
- Churchill, G. A. (1979), "A paradigm for developing better measures of marketing constructs," *Journal of Marketing Research*, 16 (February), p. 64-73.

- Churchill, G. A. (1995), *Marketing Research: Methodological Foundations*: Forth Worth: The Dryden Press.
- Colin, S. & Ivens, J. (2005), *Building great customer experiences*, Palgrave Macmillan, Basingstoke.
- Ferber, R. (1977), "Research by convenience," *Journal of Consumer Research*, 4, p. 57-58.
- Fornell, C. & Larcker, D. F. (1981), "Evaluating structural equation models with unobservable variables and measurement error," *Journal of Marketing Research*, vol. 18, p. 39-50.
- Gerbing, D.W. & Anderson, J. C. (1988), "An updated paradigm for scale development incorporating unidimensionality and its assessment," *Journal of Marketing Research*, 25 (May), p. 186-192.
- Gilmore, J. H. & Pine, J. (2002a), "Customer experience places: The new offering frontier," *Strategy Leadership* 30 (April) p. 4-11.
- Greenwell, C., Fink, J. & Pastore, D. L. (2002), "Assessing the influence of the physical sports facility on customer satisfaction within the context of the service experience," *Sport Management Review* 5, p. 129-148.
- Hair, J. F., Anderson, R. E. & Black, W. C. (1998). *Multivariate Data Analysis* (5 Edition): Prentice-Hall International, Inc.
- Hair, J. F., Rolph E. Anderson, R. E. & Black, W. C. (2010), *Multivariate Data Analysis* (5 Edition): Prentice-Hall International, Inc.
- Hall, J., O'Mahony, B., & Vieceli, J. (2010), "An empirical model of attendance factors at sporting events," *International Journal of Hospitality Management*, 29, p. 328-334.
- Havitz, M. E. & Mannell, R. C. (2005), "Enduring involvement, situational involvement, and flow in leisure and non-leisure activities," *Journal of Leisure Research*, 37, p. 152-177.
- Holbrook, M. B. (1994), "The nature of customer value: an anthology of services in the consumption experience," in *Service Quality: New Directions in Theory and Practice*, ed. Roland T. Rust and Richard L. Oliver, Thousand Oaks, CA: Sage, p. 21-71.
- Holbrook, M. B. & Hirschman, E. C. (1982), "The experiential aspects of consumption: Consumer fantasies, feeling and fun," *Journal of Consumer Research*, 9 (2), p. 132-140.
- Jacoby, J. & Chestnut, R. (1978), "Brand Loyalty: Measurement and Management," New York: John Wiley & Sons.
- Gilmore, J. H. & Pine, J. (2002b). "The experience is the marketing," *Monograph Strategic Horizons*. Aurora, OH.
- Kang, G. D. & James, J. (2004), "Service quality dimensions: an examination of Grönroos's service quality model," *Managing Service Quality* 14, p. 266-277.

- Keng, C. J., Huang, T. L., Zheng, L. J. and Hsu, M. K. (2007), "Modeling service encounters and customer experiential value in retailing: An empirical investigation of shopping mall customers in Taiwan," *International Journal of Service and Industry Management*, (April), p. 349-367.
- Klien, R. B, (2005), *Principles and Practice of Structural Equation Modeling*, 2<sup>nd</sup> ed. The Guilford Press, New York.
- MacKenzie, S. B. and R. L. Lutz (1989), "An empirical examination of the structural antecedents of attitude toward the Ad in an advertising pretesting context," *Journal of Marketing*, 53(April), p. 48-65.
- Mahalingam, E. (2009), "Boosting the Business of F1" StarBizweek, Saturday, 14 February.
- Mascarenhas, O., Kesavan, R. A. & Bernacchi, M. (2006), "Lasting Customer Loyalty: A total Customer Experience Approach," *Journal of Consumer Marketing*, 23 (September), p. 397-405.
- Mathwick, C., Malhotra, N. & Rigdon, E. (2001), "Experiential Value: Conceptualization, measurement and application in the catalogue and Internet shopping environment," *Journal of Retailing*, 77 (April), p. 39-56.
- Mano, H. & Oliver, R. L. (1993), "Assessing the dimensionality and structure of consumption experience: evaluation, feeling and satisfaction," *Journal of Consumer Research*, 20 (December), p.451-466.
- Musa, R., Putit, L. & Kassim, R. (2009), "Disentangling Sport Event Experiential Value (SEEV): F1 – Petronas Malaysia Grand Prix's Evidence," *Journal of International Business and Entrepreneurship*, 14 (2), p. 1-18.
- Nunnally, J. & Bernstein, I. (1994), "Psychometric Theory," 3rd ed. New York: McGraw-Hill, Inc.
- Olorunniwo, F., Hsu, M. K. and Udo, G. U. (2006), "Service quality, customer satisfaction, and behavioral intentions in the service factory," *Journal of Services Marketing*, 20(1), p. 59-72.
- Oliver, R. L. (1999), "Whence Consumer Loyalty?," *Journal of Marketing*, 63 (special issue), p. 33-44.
- Peter, P. & Olson, J. C. (1987), "Consumer behavior: Marketing strategy perspectives," Homewood, IL: Irwin.
- Pine, J. II & Gilmore, J. H. (1998), "Welcome to the experience economy," *Harvard Business Review*, 76 (July), p. 97-106.
- Ping, R. A. (2004), "On assuring valid measures for theoretical models using survey data," *Journal of Business Research*, 57, p. 125-141.
- Pons, F., Murali, M & Nyeck, S. (2005), "Consumer Orientation Towards sporting Events: Scale development and Validation." *Journal of Service Research*, 8 (3), p. 276–287.
- Russell, J. A. & Pratt, G. A.. (1980), "A description of the affective quality attributed to environments," *Journal of Personality and Social Psychology*, 38 (September ), p. 311–322.

Settoon, R. P., Nathan Bennett, N. & Liden, R. C. (1996), "Social exchange in organizations: Perceived organizational support, leader-member exchange, and employee reciprocity," *Journal of Applied Psychology*, 81(3), p. 219-27.

Sheth, J. N., Newman, B. I. & Gross, B. (1991), "Why we buy what we buy: A theory of consumption values," *Journal of Business Research* 22 (March), 1991, p. 159-170.

Sharma, S. (1996), "*Applied Multivariate Techniques*," John Wiley and Sons Inc., New York.

Smith, S. & Wheeler, J. (2002), "*Managing the customer experience: Turning customers into advocates*," Prentice Hall, London.

StarBizweek (2009), "Revvng in Asia, cover feature," 12th February.  
<http://biz.thestar.com.my/news/story.asp?file=/2009/2/14/business/3245174&sec=business>

Stone, R. (1984), "The marketing characteristics of involvement," *Advances in Consumer Research*, 11, p. 210-215.

Ullman, J. (2006), "Structural equation modeling," In B.G. Tabachnick & L.S. Fidel (Eds.), *Using Multivariate Statistics*, 5th ed., 653-771, Boston: Allyn & Bacon.

Wakefield, K. L. & Blodgett, J. G. (1999), "Customer response to intangible and tangible service factors," *Psychology & Marketing*, 16 (Jan), p. 51-68.

Wann, D. L. (1995), "Preliminary validation of the sport motivation scale," *Journal of Sport and Social Issues*, 19 (1), p. 377-397.

Westbrook, R. A. (1987), "Product/consumption-based affective responses and post-purchase processes," *Journal of Marketing Research*, 24(3), p. 258-270.

Westbrook, R. A. & Oliver, R. L. (1991), "The dimensionality of consumption emotion patterns and consumer satisfaction," *Journal of Consumer Research*, 18 (Jun), p. 84-91.

Yanamandram, V. & White, L. (2006), "Exploratory and confirmatory factor analysis of the perceived switching costs model in the business services sector," Australia and New Zealand Marketing Academy Conference, Brisbane, Queensland.

Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996), "The behavioral consequences of service quality," *Journal of Marketing*, 60 (April), p. 31- 46.

## BIOGRAPHY

Rosidah Musa is a Deputy Director of the Institute of Business Excellence/ Head for Center of Halal Management and Science; Faculty member of Arshad Ayub Graduate Business School, Faculty of Business Management, Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia (office phone: 603-5521-1946; fax: 603-55211941; e-mail: [rosidahm@salam.uitm.edu.my](mailto:rosidahm@salam.uitm.edu.my) and [dr.rosidahmusa@gmail.com](mailto:dr.rosidahmusa@gmail.com))

Rezian-na Muhammad Kassim, a senior lecturer at the Faculty of Sport Science and Recreation, Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia. (e-mail: [rezian@salam.uitm.edu.my](mailto:rezian@salam.uitm.edu.my))