

What Attracts NASCAR Female and Male Fans? A Factor Analysis of Motivation for Auto-Racing Spectators

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Auto-racing is a popular professional sport in sport industry. The NASCAR has become the most attended single professional sport and the second most popular professional sport in TV rankings of US right behind National Football League (Amoto et al., 2005), which generated 135,000 average attendees at a NASCAR event (Jeffery & Williams, 2006). However, Research efforts in NASCAR industry have been often given to economic impact of the events (Bernthal & Regan, 2004), efficiency of points competition in the industry (Schwartz et al., 2007), discovering political viewpoints of the spectators (Groseclose, 2011), or fans identification during NASCAR events (Levin & Beasley, 2004). Why do the spectators spend good money to attend these noisy events? What are fans' motives regarding to their consumption of NASCAR? Is there a gender difference among motivational factors responded by the fans? There is a dearth of research to answer these questions. Therefore a factor analysis of motivation for NASCAR fans becomes essential. The purposes of this study were to develop a valid and reliable instrument for measuring essential motivation factors for auto-racing spectators and determine gender difference of the fans. A survey instrument entitled 'Inventory of Motivation for Auto-Racing Spectators' (IMARS) was developed through stages of literature review, items generation, content validation, and reliability. The IMARS was drafted with 24 items under the factors of Provocation, Affiliation, Utilitarian, Gratification, Information, and Socialization based on the theories of motivation and social economy. An on-site convenient survey was conducted during major fall racetrack events in East Coast region of America. A total of 922 surveys including a demographic information sheet and the IMARS were distributed randomly at the entrances of the three-day race events. The effective surveys (N = 650; male = 371, female = 279) were selected and randomly split into two halves as Calibration Sample (A) and Validation Sample (B) for use of factors analyses. Sample A (n = 325) was analyzed in Exploratory Factor Analysis with Direct Oblimin in SPSS 17.0 and the alpha .05 and factor loading (FL) .50 were selected. After eliminating the lower FL items, 16 items were tested in Confirmatory Factor Analysis of AMOS 17.0 with the data of Sample B (n = 325). The fit index ($\chi^2/df = 2.32$, RMSEA = .04, AGFI = .93, GFI = .93, IFI = .91), indicated that the IMARS was acceptable for this type of data (Byrne, 2010). A 4-factor model (Affiliation, Utilitarian, Information, Gratification) with acceptable (.70 - .85) internal consistency was confirmed.

Multivariate Analysis of Variance was further utilized to examine differences between male and female groups among the factors and result was significant (Lambda = .980, $p < .01$). Follow-up Analyses of Variance were performed for testing difference of each factor, and Affiliation ($F = 6.30$, $p < .05$) and Information ($F = 10.44$, $p < .01$) were found significant differences of gender. Female spectators scored higher than male spectators on both Affiliation ($M = 5.71$ vs. $M = 5.40$) and Information ($M = 5.01$ vs. $M = 4.61$). Female NASCAR fans are motivated more than male fans due to affiliation with identified peers or event brand. Obtaining information and enjoying new events were rated more important motives for the female than male fans.

IMARS developed from theoretical foundation and scientific procedure could be employed as a valid tool to measure motivational factors for auto-racing spectators. Marketing professionals may obtain meaningful information by using IMARS for analyses of consumer behavior, decisions of pricing, or better fan retention in the competitive sport industry.