

**Dimensions of General Market Demand Associated with Professional Team Sports: Development of a Scale**

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Researchers have recognized the continued growth of spectator sports in North America and pointed out that spectator sports continue to be a popular leisure behavior of Americans (Ross & James, 2006). The augmentation of spectator sports has been confirmed through attendance and media viewership rates. In 2003-2004, approximately 476 million people attended spectator sport events in North America. Brandt (2004) reported that approximately 137 million television viewers watched the Super Bowl in 2004. The increasing popularity of professional spectator sports has led to the establishment of new leagues, teams, and multimedia outlets, but has also provided more spectating options for sport consumers and has also created greater competition among various leagues and teams for consumers. Due to a crowded sport marketplace, sport consumers now have many options on how to spend their leisure time and discretionary dollars. As market competition is becoming more intensified, it is important for both academicians and practitioners to understand game consumption related variables in an effort to improve the quality of product offerings and enhance competitiveness of the sport product (i.e., sport games). Synthesizing key game demand variables proposed by Schofield (1983) and production functions suggested by Greenstein and Marcum (1981), Zhang, Pease, Hui, and Thomas (1995) proposed the systematic concept of market demand, which was defined as the spectators' expectations towards the main attributes of the core product (i.e., the game itself). Braunstein, Zhang, Trail, and Gibson (2005) further explained that market demand was a set of essential constructs associated with the game that a sport team could offer to its existing and prospective consumers.

A number of studies have been conducted to develop measurement instruments that assess market demand (Braunstein et al., 2005; Zhang et al., 1995; Zhang, Lam, & Connaughton, 2003). Additionally, numerous studies on sport market demand have been conducted to examine its predictability on game attendance (Hansen & Gauthier, 1989; Zhang et al., 2003). Market demand factors have been consistently identified as influencing factors for spectator attendance of professional team sport events (Braunstein et al., 2005; Hansen & Gauthier, 1989; Zhang et al., 2003). A theoretical justification for the market demand studies can be partially attributed to the Theory of Reasoned Action proposed by Fishbein and Ajzen (1975). This theory postulates that human behavior is a direct consequence of behavioral intentions, which are functions of attitude and subjective norm. Several researchers have found that attitude construct was more explanatory in accounting for behavioral intentions when compared to that of subjective norm (Stutzman & Green, 1982; Warshaw, Calantone, & Joyce, 1986). A strong attitude towards a certain object or phenomenon could act as powerful heuristics that positively direct consumer behavior (Fazio, Powell, & Williams, 1989). Likewise, when a sport consumer holds a positive attitude towards the attributes of game product such as home team/athlete performance, and/or game schedule, the positive attitude tends to be transformed into attendance and re-attendance behavior (Zhang et al., 2003).

Although tremendous research efforts have been made, two major limitations have been identified in previous studies. First, previous studies were typically conducted with a specific focus on professional sports such as NBA (Zhang et al., 1995), MLB (Braunstein et al., 2005), and NFL games (Zhang et al., 2004), suggesting a lack of generalizability of the measurement instruments and the research findings. Second, only one empirical study has been found in the literature that focused on the assessment of general market demand associated with professional sport consumption (Zhang et al., 2003a) which was limited by including only three general factors in the study (i.e., Game Attractiveness, Marketing Promotion, and Economic Consideration) and ignored the presence of other possible factors. Braunstein et al. (2005) identified Love of Professional Sport as an important dimension of market demand that was related to MLB Spring Training games. Schedule Convenience is another factor that was consistently found to be an imperative factor of market demand. From an analytical standpoint, Bagozzi (1980) argued that one reason for model misspecification in marketing research could be due to omitting important variables from the model. Further examining the concept and factor structure of general market demand appears necessary in order to formulate general promotion guidelines for researchers and practitioners.

Therefore, the purpose of this study was to examine the dimensions of general market demand associated with professional team sports and develop a scale that reflected the identified dimensions. We developed the Scale of Market Demand in Professional Team Sports (SMD-PTS) that includes 46 items under six factors, based on the Theory of Reasoned Action

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(Fishbein & Ajzen, 1975) as a primary theoretical framework and empirical findings of previous market demand studies (e.g., Braunstein et al., 2005; Zhang et al., 1995, 2003, 2003). The six factors were: Home Team (10 items), Opposing Team (10 items), Game Promotion (4 items), Economic Consideration (6 items), Sport Epitome (10 items), and Schedule Convenience (6 items). These items were phrased into a statement in a 5-point Likert type scale, ranging from 1 = 'Not at All' to 5 = 'Very Much.' A test of content validity and pilot study (n = 32) also confirmed the preliminary instrument in terms of content relevance, representativeness, and clarity.

Following a community intercept method, the researchers applied the scale to professional sport consumers (N = 453) in four southeastern metropolitan areas. Data were randomly split into two halves: one for EFA and the other for CFA. In the EFA with alpha extraction and promax rotation, six factors with 31 items emerged based on a set of stringent criteria: Opposing Team (9 items), Home Team (6 items), Game Promotion (5 items), Economic Consideration (4 items), Sport Epitome (4 items), and Schedule Convenience (3 items). In the CFA with maximum likelihood estimation, the hypothesized model was tested and respecified according to model fit, modification indices, and theoretical reviews of the items. Consequently, a five-factor model with 17 pertinent items provided good fit to the data (e.g., RMSEA = .08; SRMR = .05), where the Sport Epitome factor was not retained. This five-factor model also displayed robust convergent and discriminant validity, as well as sound internal consistency and construct reliability. In this study, the unique characteristics associated with general professional team sports were incorporated into the scale development in an effort to inspire and enhance scientific inquiry into this topic area. It was anticipated that the developed SMD-PTS would be frequently adopted by researchers and marketers to examine the target markets of professional team sports and their demands for the core attributes of game product. Sport marketers in professional team sports should take into consideration the five SMD-PTS factors when formulating a marketing mix (i.e., product, place, price, and promotion) to effectively promote their game products.