

The Impact of Perceived Value of Sports Licensed Merchandise on Spectating Intention and Repurchase Intention: A Case Study of the 2025 Chengdu World Games

Huimin Wu*

School of Economics and Management, Chengdu Sport University, Chengdu, Sichuan Province 641418, China

**Corresponding author: Huimin Wu*

Abstract

This study, based on the Stimulus-Organism-Response (S-O-R) theoretical model and utilizing a sample of 454 consumers, constructs a path model to examine the effects of “perceived value (economic value, social value, aesthetic value), satisfaction, spectating intention towards the event, and repurchase intention for licensed merchandise.” The results indicate that all three dimensions of perceived value have a significant positive impact on satisfaction. Satisfaction, in turn, significantly positively influences both repurchase intention and spectating intention. Moreover, satisfaction plays a fully mediating role between perceived value and spectating intention, while it plays a partially mediating role between perceived value and repurchase intention. These findings reveal the intrinsic psychological transformation mechanism—from consumers’ cognitive appraisal of the value of event-related products to their behavioral intention to participate in the event—within the consumption context of licensed merchandise. This provides empirical evidence for event organizers and brand owners to enhance consumer satisfaction, promote sustained consumption, and encourage event participation by optimizing product value attributes.

Keywords

sports licensed merchandise, perceived value, satisfaction, repurchase intention, spectating intention, S-O-R theory

1. Introduction

Sports consumption constitutes a pivotal domain for advancing the “Sports Power” national strategy and upgrading service-oriented consumption. The “14th Five-Year Plan for Sports Development” explicitly mandates the “enhancement and expansion of sports consumption, alongside the cultivation of new forms and models within the sports consumption sector” [1]. Against this policy backdrop, the consumption surge surrounding major sporting events—such as the Olympic Games and World Games—and their licensed merchandise offers a quintessential window through which to observe contemporary sports consumption behaviors. A pertinent example is the 2022 Beijing Winter Olympics, where revenue from licensed products, epitomized by the mascot “Bing Dwen Dwen,” surpassed \$395 million (approximately 2.5 billion RMB),

underscoring the significant economic contribution of such merchandise [2]. Olympic memorabilia, serving as key vehicles for sports consumption, are not merely transactional items possessing economic value; they also function as potent carriers of cultural dissemination and emotional connection [3]. The socio-economic benefits generated by large-scale sports events and their derivatives are substantial, effectively catalyzing local economic growth and societal development [4].

Sports event licensed products, acting as unique vessels for event culture and fan sentiment, engender consumption behaviors that extend beyond the fulfillment of functional needs to encompass deeper psychological mechanisms. Extant research has explored related aspects of sports consumption from various angles. For instance, concerning emerging niche sports franchises, studies indicate that community experience can foster highly engaged fans more effectively than competitive performance alone [5]. In the realm of sponsorship, sports sponsorship has been shown to indirectly enhance consumer purchase intention by improving brand image [6]. Furthermore, engagement in sports consumption activities-including participation, live spectating, and media viewing-can bolster consumers' short-term and long-term subjective well-being by fulfilling underlying psychological needs [7]. These collective findings provide a foundational understanding of the multidimensional impacts inherent in sports consumption.

Nevertheless, significant research gaps persist concerning the specific context of sports event licensed merchandise. Firstly, the majority of existing studies focus on isolated dimensions or direct effects, lacking an integrated model that examines how multidimensional perceived value simultaneously influences both consumption intention and spectating intention through the mediating role of satisfaction. For example, while research in the cultural and creative product domain has validated that experiential design influences purchase intention via satisfaction [8], it has not addressed the specific mechanism of emotional transfer from the product to the event itself. Similarly, studies on online shopping have explored the impact of perceived quality on purchase intention [9, 10], yet they have not tested the differential roles of multidimensional value perceptions within the specific scenario of sports licensed merchandise. Secondly, although the phenomenon of emotional transfer is touched upon in brand extension and sponsorship literature [6], the complete psychological transformation pathway from product satisfaction to event spectating intention within the consumption of licensed merchandise has not been systematically validated under the S-O-R framework. Finally, existing sports consumption research is predominantly based on professional sports or specific projects within Western contexts (e.g., Europe and America) [5], resulting in a relative scarcity of studies focused on licensed merchandise associated with large-scale international comprehensive events, such as the Olympic Games or World Games. Consequently, introducing the S-O-R theory to construct and test an integrated "perceived value – satisfaction – behavioral intention" model holds significant theoretical and practical importance for elucidating the complete consumer psychological mechanism within the context of Chinese consumers at major sporting events.

Specifically, prior research has yet to clearly delineate the precise pathways through which consumers' perceived value of and satisfaction with merchandise concretely act upon the formation of consumption intention and spectating intention. This points to a lack of refined empirical models specifically targeting behavioral conversion related to licensed product consumption. Concurrently, conclusive findings regarding the mediating mechanism of satisfaction between the dimensions of perceived value and behavioral intentions remain elusive [11, 12]. To address these two identified research gaps, this study introduces the classic S-O-R (Stimulus-Organism-Response) theoretical framework from the field of marketing. It specifically focuses on the perceived value of and satisfaction with sports event licensed merchandise, and their relationship with consumers' repurchase intention for the merchandise and their spectating intention towards the event. This study aims to construct and validate an integrated structural model to examine how consumers' perceived value (economic, social, aesthetic) and satisfaction with sports event licensed merchandise influence their subsequent repurchase intention and event spectating intention. The findings are intended to provide a more comprehensive theoretical perspective for understanding the internal transformation process from value cognition to behavioral intention within sports consumption. Simultaneously, it seeks to offer empirical evidence to assist event operators in fostering consumer participation and enhancing event loyalty by strategically improving product value and consumer satisfaction.

2. Theoretical Framework and Hypothesis Development

2.1 Theoretical Model

Sports consumption, as a composite behavior integrating physical practice, emotional investment, and social interaction, exhibits distinctive characteristics that differentiate it from general commodity or service consumption [13]. The consumption behavior pertaining to sports event licensed merchandise profoundly embodies four distinctive traits that warrant detailed examination. The first characteristic is Embodiment and Experientiality, where consumers achieve embodied participation in sporting events through purchasing, owning, wearing, or using licensed merchandise, with these products serving as material carriers enabling consumers to transcend spatial and temporal constraints while facilitating continuous access to event-related emotional experiences and identity immersion. The second dimension is Value Duality and Symbolism, where licensed merchandise possesses both utilitarian value and significant symbolic value, functioning not merely as consumer goods but as important media for expressing event identification and constructing social identity [3, 14], serving as symbolic vessels carrying event culture, urban spirit, and fan sentiment. The third aspect is Community and Sociality, where licensed merchandise acts as both access credentials and identity markers within fan communities, with ownership and use of event-related merchandise rapidly fostering group belonging and facilitating social interaction, making consumption itself a form of social practice [5]. The fourth characteristic is Emotional Dependence and Behavioral Continuity, where positive merchandise experiences cultivate emotional attachment that encourages sustained engagement, creating behavioral persistence through repeated consumption patterns over time.

These characteristics indicate that the consumption of sports licensed merchandise is not merely a simple transactional behavior, but rather the product of the complex interplay between external product attributes, individual internal psychological factors, and intricate social contexts. The traditional Stimulus-Response (S-R) linear paradigm proves insufficient for fully revealing the underlying psychological mechanisms involved. Therefore, this study introduces the Stimulus-Organism-Response (S-O-R) theoretical model as its overarching analytical framework. Initially proposed by Woodworth (1929), this model incorporates the crucial mediating variable “Organism” (O) between the external “Stimulus” (S) and the ultimate behavioral “Response” (R), emphasizing that internal psychological states-including cognitive processes and affective responses-serve as fundamental drivers of behavior.

Within the specific research context, the multidimensional perceived value inherent in sports event licensed merchandise-namely the economic value, social value, and aesthetic value as perceived by consumers-collectively constitutes the external environmental “Stimulus” influencing consumer psychology. The internal psychological and emotional states generated after consumers perceive the product’s value represent the core mediating variable of this study: satisfaction. Satisfaction reflects consumers’ holistic affective assessment of whether the product’s value meets their expectations and needs. The “Response” manifests as observable behavioral intentions driven by satisfaction, which this study operationalizes into two distinct categories: first, repurchase intention directed toward the merchandise itself; second, spectating intention representing the transfer of positive affect from the merchandise to the event itself. The latter particularly embodies the unique “from product to event” behavioral logic characteristic of sports consumption.

2.2 Definition of Perceived Value and Related Research

Perceived value is defined as the consumer’s overall assessment of a product’s utility based on a trade-off between perceived benefits and sacrifices [15]. This study employs the theoretical framework proposed by Sweeney and Soutar (2001), categorizing the perceived value of sports licensed merchandise into three core dimensions: economic value, social value, and aesthetic value. These dimensions collectively form the fundamental basis for consumers’ evaluation of licensed merchandise value: economic value reflects transaction fairness, social value represents the product’s identity-signaling function, and aesthetic value relates to emotional appeal. Together, they influence consumer satisfaction with the product and associated sports brands, as well as subsequent behavioral intentions [16], thereby constituting critical components of this study’s theoretical model.

Economic value refers to consumers' overall perception of product cost-effectiveness and practical performance. Price represents a significant influencing factor in sports licensed merchandise consumption. Research indicates that over 30% of potential consumers abstain from purchasing Olympic merchandise due to high prices, while more than 50% report that price discounts significantly enhance purchase intention [2]. In vending machine operations, consumption context indirectly affects price premiums through perceived quality, demonstrating the close relationship between economic value perception and situational/quality judgments [17]. In online shopping environments, price judgment influences purchase intention through the full mediation of perceived quality [18]. Studies on green agricultural products show that reliability perception of quality significantly affects purchase intention [19]. These findings collectively support the fundamental role of economic value in consumption decisions.

Social value emphasizes the product's role in facilitating interpersonal connections and strengthening group belonging. As "social symbols," the group identification attribute of sports licensed merchandise represents a distinctive feature differentiating them from ordinary goods. Research confirms that purchasing and using team merchandise can significantly enhance team identification [20]. For emerging niche sports teams, community sense and social experience serve as core factors driving high fan engagement and payment willingness [5]. In the cultural and creative products domain, social experience design has been demonstrated to significantly improve consumer satisfaction [8]. The mechanism whereby sports sponsorship influences purchase intention through brand image [6] also reflects the transmission of social value. These studies highlight the central importance of social value in sports consumption.

Aesthetic value denotes the emotional pleasure arising from visual appeal and sophisticated design. In major sporting events, souvenir design integrates event spirit with local culture, where aesthetic expression serves as the key to triggering emotional resonance [3]. The design and development management system for Olympic licensed merchandise emphasizes the integration of aesthetic elements with brand equity [14]. In cultural and creative products, aesthetic experience design represents one of the most significant factors driving consumer satisfaction and purchase intention [8]. Research on urban community public sports services indicates that public perceived quality affects public satisfaction and trust [21], incorporating environmental aesthetic considerations. This evidence supports the emotion-driving function of aesthetic value.

2.3 Definition of Satisfaction and Related Research

Satisfaction represents consumers' overall evaluation of a product/service experience, reflecting the extent to which their needs and expectations are fulfilled. In empirical research, perceived value is regarded as a crucial antecedent of satisfaction. Cross-domain evidence consistently demonstrates that satisfaction serves as a pivotal affective nexus connecting value perception to subsequent behaviors: in cultural and creative product consumption, multidimensional experience design effectively enhances satisfaction [8]; in online shopping, perceptions of product quality and service quality significantly impact satisfaction [10, 22]; in urban community public sports services, public perceived quality influences trust through public satisfaction [23]; in property management services, service quality affects community belonging through value perception [23]. Within sports consumption contexts, fan satisfaction with spectating experiences proves to be a key predictor of team loyalty [20], while sports consumption activities can enhance subjective well-being by fulfilling psychological needs [7].

Guided by the Consumption Value Theory [16] and the PERVAL scale framework [20], this study operationalizes perceived value into three dimensions: economic, social, and aesthetic. Consumers form overall value judgments through comprehensive assessment of these dimensions, which directly determines their satisfaction degree: when perceived value exceeds expectations, it generates positive confirmation effects that subsequently foster satisfaction. This mechanism finds support in sports licensed merchandise research: economic value assessment of marathon licensed products significantly influences satisfaction [24]; products' social and aesthetic values positively affect satisfaction by fulfilling needs for group belonging and emotional pleasure [25]; comprehensive evaluation of multidimensional value of licensed merchandise serves as an important antecedent of satisfaction [26]. Based on this foundation, the study proposes the following hypotheses:

H1: The economic value of sports event licensed merchandise has a significant positive impact on consumer satisfaction.

H2: The social value of sports event licensed merchandise has a significant positive impact on consumer satisfaction.

H3: The aesthetic value of sports event licensed merchandise has a significant positive impact on consumer satisfaction.

2.4 Definitions of Consumption Intention and Spectating Intention with Related Research

Consumption intention (repurchase intention) refers to consumers' subjective willingness to repurchase specific products or services in the future. Satisfaction constitutes the core affective driver of this intention, a relationship substantiated by empirical support across multiple domains. In cultural and creative product consumption, satisfaction partially mediates the relationship between experience design and purchase intention [8]; in online shopping, it completely mediates the relationship between perceived quality and consumer loyalty in online bookstores [22]; in fresh produce e-commerce, platform quality influences repurchase behavior through perceived quality and trust [27]. In sports-related contexts, sports sponsorship affects purchase intention through brand image [6], while marathon participants' satisfactory experiences with peripheral merchandise directly translate into subsequent purchase intention [25]. This evidence collectively establishes satisfaction's driving role in consumption intention.

Spectating intention specifically denotes consumers' subjective willingness to follow and participate in sports events. The key mechanism underlying its formation involves "affective transfer" - the transference of positive attitudes from licensed merchandise (sub-brand) to the event itself (parent brand). Keller's (1993) brand equity theory provides the foundation, indicating that positive experiences with sub-brands can enhance favorability and loyalty toward parent brands. As material symbols of events, the core value of sports licensed merchandise lies precisely in this symbolic association. Although direct empirical evidence remains limited, related research supports this logic; for instance, consumer identification with league-licensed merchandise is often considered an extension of event support. This study accordingly deduces that satisfaction with licensed merchandise will extend through brand association into sustained spectating intention toward events.

The fundamental role of satisfaction in shaping consumption intention finds theoretical grounding in Oliver's (1980) Expectation-Confirmation Theory: when product performance meets or exceeds expectations, the resulting positive confirmation discrepancy generates satisfaction; this positive psychological state reduces perceived risk and decision uncertainty, thereby transforming into clear consumption intention. Empirical research thoroughly validates this pathway: in retail e-commerce, fresh produce consumers' satisfaction decisively influences their repurchase intention; in sports consumption, satisfactory experiences with licensed merchandise not only directly convert to purchase intention but also reinforce continuous consumption tendency by strengthening community identification. This evidence clearly delineates the transformation path from satisfaction to consumption intention. Based on this, the study proposes:

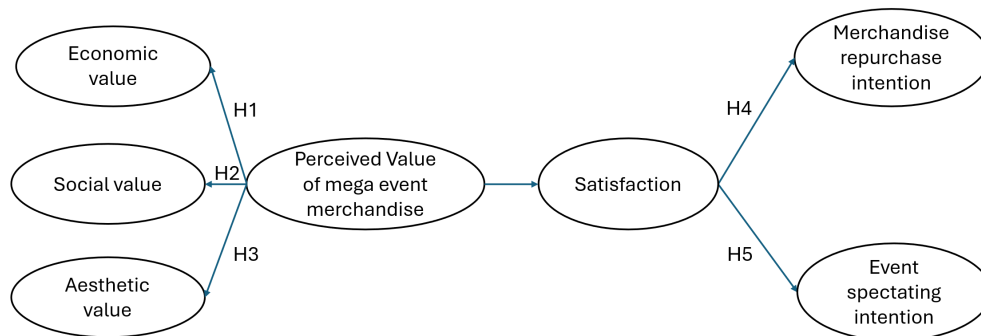
H4: Consumer satisfaction with sports event licensed products has a significant positive impact on their consumption intention.

As consumers' overall evaluation of product consumption experiences, satisfaction exerts significant extended influence on subsequent event participation intention. Within sports consumption contexts, licensed merchandise functions as material carriers of event brands. The satisfactory experiences generated from them naturally transfer, through emotional connection mechanisms, to attitudes and behavioral intentions toward the events themselves. Sports marketing research indicates that positive fan evaluations of licensed merchandise enhance spectating intention. Particularly noteworthy, Zhang Hui's (2020) study of marathon participants found that satisfactory experiences with event peripheral products significantly increased runners' intention to participate in subsequent events, highlighting the distinct "from product to event" affective transfer phenomenon in sports consumption [24]. Accordingly, the study proposes:

H5: Consumer satisfaction with sports event licensed products has a significant positive impact on their spectating intention.

Integrating these hypotheses, the theoretical model presented in Figure 1 is constructed: perceived value (economic, social, aesthetic) serves as the antecedent variable, influencing both consumption intention and spectating intention through the mediation of satisfaction.

Figure 1: Hypothetical structural model. Source: Authors' own work



3. Method

3.1 Scale and Questionnaire Design

The survey questionnaire employed in this study comprises two primary sections. The first section is designed to collect respondents' demographic characteristics. The second section constitutes the core research content, encompassing the measurement of four key constructs: "perceived value," "satisfaction," "consumption intention," and "spectating intention." The measurement of each construct draws upon well-established scales from both domestic and international literature. While preserving the core concepts of the original scales, appropriate revisions were made to align with the research context of Chinese consumers and to refine the item phrasing. All measurement items utilized a seven-point Likert scale format.

3.2 Sample and Data Collection

The target population for this study consisted of individuals who had purchased licensed merchandise from major sporting events, notably the Chengdu 2025 World Games. Adopting a mixed-mode survey approach similar to the methodology utilized by Liu et al. (2024) in large-scale event research, data were collected through both online and offline channels. The online survey was administered nationwide via the Questionnaire Star platform, with a random distribution targeting eight major host cities for large-scale events, including Chengdu, Beijing, and Shanghai. Concurrently, offline data collection was conducted in the vicinity of the Chengdu 2025 World Games venues and at official licensed merchandise stores. The data collection period spanned approximately one month, yielding an initial return of 550 questionnaires. Following a rigorous screening and cleaning process—which involved eliminating responses from irrelevant populations, those failing attention-check items, and those containing inconsistencies—a final sample of 454 valid questionnaires was obtained, representing a valid response rate of 82.55%.

The basic characteristics of the final sample are as follows: females constituted 56.17% of the sample, while males accounted for 43.39%. In terms of educational attainment, the majority of respondents held a bachelor's degree or associate degree (85.02%), with 11.89% possessing a master's degree or higher. The distribution of annual disposable income groups was approximately 1.5 (under ¥50,000) : 2.6 (¥50,000-

¥100,000) : 3.6 (¥100,000-¥200,000) : 1.5 (¥200,000-¥300,000) : 0.6 (¥300,000 and above). Regarding marital status, the majority of the sample was married (71.59%).

4. Results

4.1 Descriptive Statistical Analysis

The initial phase of data analysis involved testing for univariate normality across all measured items. As systematically presented in Table 1, the statistical analysis revealed that both the skewness and kurtosis values for all measurement items fell within acceptable ranges for normal distribution. The skewness values ranged from -0.75 to -0.36, while the kurtosis values varied between -0.79 and -0.05. These results comfortably satisfy the established cut-off criteria for normality assessment, specifically meeting the recommended thresholds of ± 2.00 for skewness (as per Hair et al., 2019) and ± 7.00 for kurtosis (following Byrne, 2010). The consistent adherence of all items to these statistical standards provides robust support for the fundamental assumption of univariate normality, thereby establishing a solid foundation for subsequent advanced statistical analyses including confirmatory factor analysis and structural equation modeling.

4.2 Measurement Model Validation

4.2.1 Reliability and Convergent Validity

The measurement model was rigorously evaluated using confirmatory factor analysis (CFA) to assess its psychometric properties. As comprehensively detailed in Table 4, all model fit indices obtained from the CFA demonstrated excellent adherence to established standards ($\chi^2/df = 1.727$, CFI = 0.971, TLI = 0.969, RMSEA = 0.033), collectively indicating that the measurement model exhibited superior fit with the empirical data and was therefore appropriate for subsequent reliability and validity examinations. Regarding scale reliability, the composite reliability (CR) values for all latent constructs ranged from 0.882 to 0.933, with each value exceeding the recommended threshold of 0.70, thereby confirming the measurement instrument's excellent internal consistency. In terms of convergent validity assessment, all observed variables demonstrated standardized factor loadings on their respective latent constructs that surpassed the recommended value of 0.70 (with a range of 0.713-0.827). Furthermore, the average variance extracted (AVE) values for each construct varied between 0.599 and 0.652, with all values exceeding the critical benchmark of 0.50. This comprehensive set of results provides compelling evidence that the measurement scales employed in this study possess strong reliability and convergent validity, confirming that all indicators effectively converge to stably measure their intended theoretical constructs.

Table1: Psychometric properties for the structural model

| Items | | Mean | SD | Skewness | Kurtosis | CR | AVE |
|----------------|--|------|------|----------|----------|-------|-------|
| Economic value | | | | | | 0.921 | 0.625 |
| ECV1 | The merchandise has consistent quality | 4.92 | 1.51 | -0.53 | -0.43 | | |
| ECV2 | The merchandise has acceptable standard of quality | 4.85 | 1.57 | -0.36 | -0.79 | | |
| ECV3 | The merchandise is for actual need and without filling the wardrobe | 5.04 | 1.50 | -0.59 | -0.37 | | |
| ECV4 | The merchandise would last a long time | 4.98 | 1.47 | -0.62 | -0.14 | | |
| ECV5 | The merchandise is comfortable for using | 4.95 | 1.48 | -0.49 | -0.42 | | |
| ECV6 | The merchandise is delicately packed | 4.91 | 1.54 | -0.51 | -0.49 | | |
| ECV7 | The merchandise can be used for different situations | 4.89 | 1.54 | -0.40 | -0.61 | | |
| Social value | | | | | | 0.933 | 0.607 |
| SOV1 | It's a tradition to have merchandise during this type of sport event | 5.02 | 1.48 | -0.63 | -0.31 | | |
| SOV2 | It would give me social approval from others | 4.88 | 1.53 | -0.54 | -0.49 | | |
| SOV3 | It would make me a good impression on other people | 4.97 | 1.55 | -0.63 | -0.32 | | |
| SOV4 | It would help me feel accepted | 4.94 | 1.51 | -0.61 | -0.21 | | |
| SOV5 | It would improve the way I am perceived by others | 4.74 | 1.60 | -0.40 | -0.66 | | |
| SOV6 | Possession of this merchandise improves my self-image | 4.91 | 1.51 | -0.49 | -0.55 | | |

| | | | | | | | |
|----------------------------------|--|------|------|-------|-------|-------|-------|
| SOV7 | When I possess the merchandise, it helps me express my own character | 4.99 | 1.52 | -0.59 | -0.32 | | |
| SOV8 | The merchandise is a status symbol | 4.76 | 1.59 | -0.45 | -0.59 | | |
| SOV9 | The merchandise makes me more confident in social interactions | 4.91 | 1.63 | -0.63 | -0.43 | | |
| Aesthetic value | | | | | | 0.900 | 0.599 |
| AEV1 | The merchandise is beautiful in appearance | 5.16 | 1.53 | -0.70 | -0.33 | | |
| AEV2 | The merchandise would improve my appearance or the way I look | 4.90 | 1.48 | -0.44 | -0.43 | | |
| AEV3 | I feel a unique look in processing the merchandise | 5.06 | 1.51 | -0.71 | -0.05 | | |
| AEV4 | I think the design style of the merchandise is very appealing to me | 5.13 | 1.51 | -0.75 | -0.15 | | |
| AEV5 | The merchandise is harmonious and has beautiful colour matching | 5.12 | 1.54 | -0.69 | -0.17 | | |
| AEV6 | The material is vital in product evaluation | 5.08 | 1.53 | -0.55 | -0.47 | | |
| Satisfaction | | | | | | 0.928 | 0.618 |
| SAT1 | I was satisfied with the merchandise I have bought. | 5.15 | 1.42 | -0.66 | -0.23 | | |
| SAT2 | I was happy with the merchandise I have bought. | 5.04 | 1.50 | -0.59 | -0.38 | | |
| SAT3 | I was delighted with the merchandise I have bought. | 5.09 | 1.51 | -0.63 | -0.38 | | |
| SAT4 | I truly enjoy consuming the merchandise of this sport event. | 5.10 | 1.41 | -0.59 | -0.29 | | |
| SAT5 | I am pleased with the experience of consuming the merchandise of this sport event. | 5.06 | 1.45 | -0.63 | -0.21 | | |
| SAT6 | My decision to consuming the merchandise of this sport event was a wise one. | 5.05 | 1.43 | -0.68 | -0.19 | | |
| SAT7 | My expectations for the merchandise of this sport event have been met. | 4.97 | 1.41 | -0.49 | -0.34 | | |
| SAT8 | I think the time and money spent on this merchandise are worthwhile. | 5.02 | 1.47 | -0.59 | -0.31 | | |
| Merchandise repurchase intention | | | | | | 0.901 | 0.645 |
| MRI1 | I plan to continue purchasing the merchandise of the sport event. | 4.90 | 1.53 | -0.58 | -0.44 | | |
| MRI2 | I consider the sport event's merchandise to be my first choice in the future. | 4.82 | 1.51 | -0.37 | -0.64 | | |
| MRI3 | It is likely that I will continue purchasing the merchandise of the sport event in the future. | 4.98 | 1.57 | -0.60 | -0.47 | | |
| MRI4 | I anticipate to repurchase the merchandise of the sport event in the future. | 4.91 | 1.52 | -0.57 | -0.38 | | |
| MRI5 | I expect to repurchase the merchandise of the sport event in the near future. | 4.78 | 1.58 | -0.43 | -0.63 | | |
| Event spectating intention | | | | | | 0.882 | 0.652 |
| ESI1 | I intend to watch a sport event game. | 5.04 | 1.55 | -0.64 | -0.37 | | |
| ESI2 | Watching a sport event game is something I plan to do. | 4.93 | 1.58 | -0.54 | -0.47 | | |
| ESI3 | I will try to watch a sport event game during this event. | 5.08 | 1.51 | -0.71 | -0.14 | | |
| ESI4 | I will make a decision to watch a sport event game if I have chance in the future. | 5.16 | 1.50 | -0.71 | -0.16 | | |

Note(s): ECV: Economic value; SOV: Social value; AEV: Aesthetic value; SAT: Satisfaction; MRI: Merchandise repurchase intention; ESI: Event spectating intention

Source(s): Authors' own work

As shown in Table 1, the composite reliability (CR) values for all latent variables ranged from 0.882 to 0.933, all exceeding the critical threshold of 0.70, indicating excellent internal consistency of the measurement scales. The average variance extracted (AVE) values for each latent variable fell between 0.599 and 0.652, all surpassing the required benchmark of 0.50. Furthermore, all observed variables demonstrated standardized factor loadings on their corresponding latent variables that exceeded 0.70 (range: 0.713-0.827). These comprehensive results provide compelling evidence that the measurement instruments employed in this study possess strong reliability and convergent validity, confirming that the scales effectively measure their intended theoretical constructs.

4.2.2 Discriminant Validity

This study employed the Fornell-Larcker criterion to assess discriminant validity among latent variables. This methodological approach involves comparing the square roots of the average variance extracted (AVE) for each latent variable with the correlation coefficients between that variable and other latent constructs in the theoretical model. As systematically presented in Table 2, the analysis demonstrates that the square roots of AVE for all latent variables (bolded values along the diagonal) consistently exceed the correlation coefficients between the respective construct and other variables in the corresponding rows and columns. For instance, the square root of AVE for economic value (ECV) was calculated at 0.791, which is substantially greater than its correlation coefficients with social value (SOV, $r=0.616$), aesthetic value (AUV, $r=0.647$), and all other variables included in the measurement model. This consistent pattern across all variable comparisons provides robust empirical evidence that while the latent variables collectively reflect higher-order theoretical constructs, they simultaneously maintain sufficient discriminant validity. The results confirm that the measurement model effectively distinguishes between different constructs, thereby establishing strong psychometric properties for the research instrument.

Table2: Squared root of AVE and inter-construct correlations

| | ESI | MRI | SAT | AEV | SOV | ECV |
|-----|--------|--------|--------|--------|--------|-------|
| ESI | 0.807 | | | | | |
| MRI | 0.594* | 0.803 | | | | |
| SAT | 0.569* | 0.602* | 0.786 | | | |
| AEV | 0.649* | 0.582* | 0.559* | 0.774 | | |
| SOV | 0.499* | 0.557* | 0.477* | 0.670* | 0.779 | |
| ECV | 0.511* | 0.571* | 0.442* | 0.647* | 0.616* | 0.791 |

Note(s): * $p < 0.001$ The dialogue shows the square root of AVE of each construct. ECV: Economic value; SOV: Social value; AEV: Aesthetic value; SAT: Satisfaction; MRI: Merchandise repurchase intention; ESI: Event

Source(s): Authors' own work

4.3 Structural Model and Hypothesis Testing

4.3.1 Model Fit Assessment

Model fit refers to the degree of consistency between the theoretical model and the empirical data. As summarized in Table 3, the key goodness-of-fit indices demonstrate acceptable to excellent alignment with recommended thresholds: the chi-square/degrees of freedom ratio (χ^2/df) is 2.1 (values between 1 and 3 indicate good model fit), the RMSEA is 0.041 (values between 0.050 and 0.080 suggest acceptable fit), and both CFI (0.956) and TLI (0.953) exceed the critical threshold of 0.80. These results collectively indicate that the proposed structural model exhibits a satisfactory level of fit with the observed data, supporting its validity for subsequent hypothesis testing and path analysis.

Table 3: Model Fit Indices and Evaluation Results

| Fit Indices | CMIN/DF | RMSEA | CFI | TLI | IFI | NFI |
|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| CFA Test Values | 1.727 | 0.033 | 0.971 | 0.969 | 0.971 | 0.935 |
| SEM Model Values | 2.1 | 0.041 | 0.956 | 0.953 | 0.956 | 0.92 |
| Recommended Thresholds | <3 | <0.08 | >0.8 | >0.8 | >0.8 | >0.8 |
| Evaluation Result | Excellent | Excellent | Excellent | Excellent | Excellent | Excellent |

4.3.2 Path Analysis and Hypothesis Testing

This study employed structural equation modeling (SEM) to examine the significance of the hypothesized paths, utilizing the critical ratio (C.R.) value greater than 1.96 and a p-value less than 0.05 as the criteria for determining statistical significance. The analytical results demonstrate that all proposed paths achieved statistical significance, leading to the full support of research hypotheses H1 through H5. The overall model exhibits satisfactory predictive power, confirming the theoretical framework's robustness.

In the paths examining the effects of perceived value dimensions on satisfaction, the analysis reveals three significant relationships. Firstly, economic value demonstrates a substantial positive influence on satisfaction (unstandardized path coefficient = 1.000, $p < 0.001$), thereby providing strong support for hypothesis H1. Secondly, social value shows a significant positive impact on satisfaction (unstandardized path coefficient = 1.114, $p < 0.001$), confirming the validity of hypothesis H2. Finally, aesthetic value

exhibits a notable positive effect on satisfaction (unstandardized path coefficient = 1.096, $p < 0.001$), supporting hypothesis H3.

Regarding the transmission paths from satisfaction to behavioral intentions, the results indicate two significant relationships. Satisfaction manifests a strong positive influence on consumption intention (unstandardized path coefficient = 0.735, $p < 0.001$), thereby validating hypothesis H4. Simultaneously, satisfaction demonstrates a significant positive effect on spectating intention (unstandardized path coefficient = 0.702, $p < 0.001$), providing empirical support for hypothesis H5.

In conclusion, all path relationships proposed in the theoretical model receive substantial support from the empirical data. The comprehensive analysis validates the hypothesized connections between perceived value dimensions, satisfaction, and subsequent behavioral intentions, establishing a robust foundation for understanding the psychological mechanisms underlying sports licensed merchandise consumption. The consistent statistical significance across all paths underscores the model's theoretical relevance and practical applicability in explaining consumer behavior in sports marketing contexts.

Table 4: Pathway analysis results in SEM

| | | | Estimate | S.E. | C.R. | P | Label |
|-----|---|-----|----------|-------|--------|-----|-------|
| PV | → | SAT | 0.781 | 0.063 | 12.388 | *** | par_3 |
| PV | → | ECV | 1 | | | | |
| PV | → | SOV | 1.114 | 0.078 | 14.333 | *** | par_1 |
| PV | → | AEV | 1.096 | 0.077 | 14.189 | *** | par_2 |
| SAT | → | MRI | 0.735 | 0.051 | 14.559 | *** | par_4 |
| SAT | → | ESI | 0.702 | 0.051 | 13.829 | *** | par_5 |

*Note(s): *** $p < 0.001$; PV: Perceived Value (second-order construct); For identification purposes, the path coefficient of "PV→ECV" is fixed at 1.*

Source(s): Authors' own work

4.4 Test of the Mediating Role of Consumer Satisfaction

To examine the mediating effect of consumer satisfaction between perceived value and outcome variables, a bootstrap test was employed with 5,000 repeated samples. The results are systematically presented in Table 5.

In the pathway “perceived value → satisfaction → repurchase intention” (PV→SAT→MRI), the indirect effect value is 0.31. The 95% bias-corrected bootstrap confidence interval for this effect is [0.155, 0.358], which does not include zero, indicating a significant indirect effect. Simultaneously, the direct effect ($c' = 0.583$, $p < 0.01$) also reaches statistical significance. Consequently, satisfaction functions as a partial mediator in this pathway, with the mediating effect accounting for 34.71% of the total effect.

In the pathway “perceived value → satisfaction → event spectating intention” (PV→SAT→ESI), the indirect effect value is 0.443. Its 95% confidence interval is [0.311, 0.539], again excluding zero and confirming a significant indirect effect. However, the direct effect ($c' = 0.108$) is not statistically significant ($p > 0.05$). This result demonstrates that satisfaction plays a fully mediating role in this pathway. In other words, perceived value enhances event spectating intention entirely indirectly, through the pivotal mechanism of elevating customer satisfaction.

Table 5: Bootstrap Analysis of the Mediating Role of Consumer Satisfaction

| Path | Total Effect (c) | Direct Effect (c') | Indirect Effect (a*b) | BootSE | 95%BootCI | Effect Proportion | Test Conclusion |
|------------|------------------|--------------------|-----------------------|--------|-------------|-------------------|-------------------|
| PV→SAT→MRI | 0.892** | 0.583** | 0.31 | 0.051 | 0.155~0.358 | 34.71% | Partial Mediation |
| PV→SAT→ESI | 0.550** | 0.108 | 0.443 | 0.058 | 0.311~0.539 | 100% | Full Mediation |

*Note(s): * $p < 0.05$ ** $p < 0.01$; Bootstrap type = percentile bootstrap method*

Source(s): Authors' own work

5. Discussion

5.1 Conclusion

This study, grounded in the S-O-R theoretical framework and using the 2025 Chengdu World Games as an empirical context, constructed and validated an integrated “perceived value-satisfaction-behavioral intention” model. The data analysis results comprehensively support all research hypotheses, systematically revealing the psychological mechanisms underlying sports licensed merchandise consumption. The core findings can be summarized into three key points. First, all three dimensions of perceived value exert significant positive effects on satisfaction, with social value ($\beta=1.114$) demonstrating the most substantial driving effect. This indicates that in the context of major event consumption, the core function of licensed merchandise transcends its inherent practical and aesthetic attributes, instead playing a more crucial role as “social currency” and “identity tags.” The deeper motivation for consumers to purchase and possess these goods lies in seeking community belonging and achieving social identity, a finding that profoundly reveals the communal nature distinguishing sports consumption from general commodity consumption. Second, satisfaction demonstrates significant positive effects on both repurchase intention ($\beta=0.735$) and event spectating intention ($\beta=0.702$), confirming its pivotal role as an affective nexus connecting external value perception with internal behavioral intentions. Third, and most theoretically significant, is the discovery that satisfaction fully mediates the relationship between perceived value and spectating intention, while partially mediating the relationship between perceived value and repurchase intention (mediating effect accounting for 34.71%). This finding, for the first time, rigorously validates the “from product to event” emotional transfer mechanism in sports consumption through a quantitative model. It clearly reveals that consumers’ satisfactory experiences with physical products (sub-brands) serve as an essential psychological prerequisite for the transfer of positive affect to the abstract event (parent brand). Without the accumulation of positive emotional attachment to the merchandise itself, the transfer path from product value to event participation intention would be difficult to complete.

5.2 Implications

5.2.1 Theoretical Contributions

First, by applying the S-O-R theory to the unique “product-to-event” emotional transfer scenario, this study empirically demonstrates the complete process through which external stimuli ultimately drive cross-entity behavioral responses via internal affective states, thereby expanding the theory’s explanatory boundaries and application depth in sports marketing. Second, from a micro-level perspective of consumer psychology, the research dissects the specific mechanisms generating demand for sports consumption, providing empirical evidence and micro-level explanations from behavioral science for understanding the macro policy goal of “promoting the quality improvement and expansion of sports consumption.” Finally, this study clearly emphasizes that achieving high-quality development of sports event consumption fundamentally relies on the meticulous management and optimization of consumers’ multidimensional value perceptions of products, thereby creating deep satisfaction, which is essential for fundamentally stimulating sustainable consumption behavior and event participation.

5.2.2 Practical Implications

For event organizers and licensed operators, product development should shift from a traditional “souvenir” mindset to a “relationship medium” approach. While ensuring economic affordability and aesthetic value, extreme importance should be placed on embedding and designing social value. Examples include developing product series with strong community identification functions that encourage interactive sharing, thereby transforming merchandise into tools for strengthening fan connections. Simultaneously, it is crucial to learn from mature licensed merchandise management systems, implementing systematic full-life-cycle operations for product design, production, and marketing. For local governments and event planners, this study reveals a potential pathway to enhance the comprehensive benefits of events through merchandise operations. Successful licensed products are not only a direct source of revenue but also an effective lever for cultivating a loyal fan base, increasing event attendance rates, and fostering long-term engagement. Therefore, when evaluating and supporting major sports events, the development and innovative marketing of licensed merchandise should be regarded as a strategic investment capable of extending event influence and preserving cultural heritage, rather than merely a short-term commercial activity.

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Conflicts of Interest

The authors declare no conflict of interest.

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