



Designing an Integrated Model for Sports Brand Development Through Social Media: An Empirical Study

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Abstract

This study aimed to design and empirically validate an integrated model of sports brand development through social media by identifying its principal dimensions and examining the structural relationships among social media capabilities, content strategy, fan engagement, brand-building mechanisms, and sports brand development. A sequential exploratory mixed-methods design was employed in three consecutive phases. First, a meta-synthesis was conducted according to PRISMA 2020 guidelines using studies published between 2010 and 2025 in major scientific databases. From 1,148 initially identified records, 58 studies were retained for final synthesis, yielding 186 primary concepts, 43 components, and five overarching dimensions. Second, the Fuzzy Delphi Method was applied with 18 experts in sports management, sports marketing, branding, and digital marketing. After two rounds, 38 components satisfied the predetermined consensus criteria and were retained. Third, the proposed model was quantitatively assessed using data from 412 sports managers, marketing professionals, digital specialists, and sports administrators. Structural Equation Modeling based on Partial Least Squares was performed using SmartPLS 4 with 5,000 bootstrap resamples. All hypothesized structural relationships were statistically significant. Social Media Capabilities positively predicted Content Strategy ($\beta = 0.620$, $p < .001$), Fan Engagement ($\beta = 0.312$, $p < .001$), and Brand-Building Mechanisms ($\beta = 0.176$, $p < .001$). Content Strategy significantly predicted Fan Engagement ($\beta = 0.519$, $p < .001$), Brand-Building Mechanisms ($\beta = 0.241$, $p < .001$), and Sports Brand Development ($\beta = 0.137$, $p = .001$). Fan Engagement significantly influenced Brand-Building Mechanisms ($\beta = 0.493$, $p < .001$) and Sports Brand Development ($\beta = 0.207$, $p < .001$). Brand-Building Mechanisms exerted the strongest direct effect on Sports Brand Development ($\beta = 0.581$, $p < .001$). The model explained 74.1% of the variance in Sports Brand Development. Sports brand development through social media is a multidimensional and sequential process in which digital capabilities enable effective content strategies, content stimulates fan engagement, and engagement strengthens brand-building mechanisms that ultimately drive sustainable sports brand development.

Keywords: Sports Brand Development; Social Media; Content Strategy; Fan Engagement; Brand-Building Mechanisms; PLS-SEM

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1. Introduction

The rapid expansion of social media has fundamentally transformed the ways in which sports organizations, athletes, clubs, leagues, sponsors, and related commercial entities construct, communicate, and develop their brands. In contemporary sport markets, brand development is no longer dependent solely on traditional advertising, sponsorship exposure, televised competition, or physical fan experiences.

Instead, social media platforms have become strategic infrastructures through which sports brands can continuously interact with audiences, disseminate content, reinforce identity, shape perceptions, and create enduring relationships with fans and consumers. The increasing importance of digital interaction has consequently shifted sports branding from a predominantly one-way communication process toward a dynamic, participatory, and networked process in which multiple stakeholders



contribute to the creation and evolution of brand meaning. This transformation has intensified the need for sports organizations to understand how digital capabilities, content strategies, audience participation, relationship-building mechanisms, and brand outcomes interact within an integrated branding system [1-3].

Sports brands occupy a distinctive position compared with many conventional commercial brands because they are embedded in emotional, symbolic, cultural, and social relationships. Fans frequently identify strongly with teams, athletes, leagues, events, and sports products, and such identification can influence loyalty, consumption, advocacy, and community participation. The value of a sports brand therefore extends beyond functional product attributes and includes psychological attachment, perceived authenticity, collective identity, symbolic meaning, and social affiliation. Brand value in sport can emerge from athletic performance, reputation, visibility, media exposure, athlete image, emotional attachment, perceived quality, and broader associations surrounding the sports entity [4-6]. The complexity of these factors means that effective sports brand development requires a multidimensional perspective capable of explaining how brand-related resources are activated and transformed into meaningful consumer and fan outcomes.

Social media has become particularly influential because it provides sports brands with direct access to audiences and reduces their dependence on traditional intermediaries. Platforms such as Instagram, YouTube, TikTok, X, Facebook, and other digital channels allow sports organizations and athletes to communicate instantaneously, personalize content, respond to trends, monitor audience reactions, and distribute multimedia narratives on a global scale. These capabilities create new opportunities for expanding brand reach and improving brand experience, but they also increase competitive pressure because audiences are continuously exposed to large volumes of digital content. Research on social media marketing in sports settings suggests that digital interactions can substantially shape brand experience, engagement, perceived value, and consumer responses [7, 8]. Consequently, simply maintaining a social media presence is insufficient. Sports brands must possess the technological, analytical, communicative, and adaptive capabilities required to use social media strategically.

One central issue concerns the ability of sports organizations to convert social media capabilities into effective content strategies. Digital platforms create

opportunities for real-time communication, audience segmentation, performance analytics, social listening, personalization, and cross-platform integration. However, the value of these capabilities depends on the quality of the content delivered through them. Sports audiences increasingly expect content that is timely, relevant, interactive, visually appealing, authentic, and emotionally engaging. Content that effectively combines information, entertainment, storytelling, and identity expression can strengthen relationships between sports brands and their audiences, whereas inconsistent or generic communication can reduce differentiation and engagement. The importance of digital communication strategy is also evident in athlete branding, where personal brand development increasingly depends on how athletes design visual identities, manage digital communication, and communicate their commercial value through online channels [9-11]. Therefore, content strategy should be regarded as a central mechanism connecting technological capability with audience engagement and branding outcomes.

Athlete brands have themselves become important strategic assets within the broader sports branding ecosystem. Athletes can function simultaneously as competitors, celebrities, influencers, endorsers, and independent commercial brands. Their personalities, achievements, visual identities, and digital communication styles can enhance the appeal of teams, leagues, products, sponsors, and markets. The international marketing of professional sports leagues, for example, may benefit from the visibility and symbolic appeal of athlete brands, particularly when entering geographically and culturally distant markets [12]. Similarly, the commercial value of athletes depends not only on competitive performance but also on the manner in which their image is strategically developed, communicated, and monetized [4, 11]. This dynamic indicates that athlete branding and organizational sports branding are increasingly interconnected, especially through social media platforms that allow both athletes and organizations to communicate directly with global audiences.

The emergence of generative artificial intelligence and platform-based communication has added further complexity to this environment. Recent developments suggest that athlete and sports branding are increasingly shaped by algorithmic visibility, platform governance, automated content production, and human-AI co-creation. These developments raise important questions about authenticity, ownership, platform dependence, and strategic

control over brand identity [13]. Human–AI co-production may expand the capacity of athletes and sports organizations to generate personalized, scalable, and highly engaging content, but it may simultaneously alter perceptions of authenticity if audiences view brand communication as excessively artificial or detached from the human identity of the athlete or organization [13]. Accordingly, digital sports branding increasingly requires not only marketing expertise but also governance capacity and technological literacy.

Fan engagement is another central dimension of sports brand development through social media. Unlike traditional consumers, sports fans often participate actively in the construction and dissemination of brand meaning. They create content, share opinions, organize online communities, participate in campaigns, defend brands, criticize organizational decisions, and interact with other fans. Social media therefore transforms fans from passive recipients of promotional messages into active participants in the branding process. Research on online sporting communities has shown that social media can foster social capital, belonging, shared identity, and place-based attachments among fans [2]. These communities can become important sources of loyalty and advocacy because they provide social and emotional benefits that extend beyond the consumption of sport itself.

The concept of brand tribes is particularly relevant in this context. Sports fans frequently form strong communities around shared brand identities, and these groups may develop norms, rituals, symbolic practices, and emotional commitments. Brand personality can influence the formation and strength of such communities, which in turn can generate favorable behavioral consequences for sports organizations [14]. Social media facilitates these processes by creating continuous spaces for interaction in which fans can express identity, exchange information, celebrate victories, respond to defeats, and maintain connection with the sports brand between competitive events. Consequently, fan engagement can function as a crucial relational mechanism through which digital communication is converted into stronger brand relationships, loyalty, and advocacy.

The personalization of social media communication further reinforces this process. When fans perceive that social media content is tailored to their interests and preferences, they may experience greater value and stronger attachment to the brand. Research in football contexts has demonstrated that social media personalization can influence brand loyalty through perceived value and brand

attachment [8]. These findings highlight the importance of moving beyond content volume toward strategically personalized communication that reflects audience characteristics, expectations, and emotional needs. In similar fashion, digital technologies embedded in sports applications can influence consumer adoption and engagement when app quality, enjoyment, and perceived usefulness are high [15]. Thus, the digital brand experience extends beyond conventional social networking platforms and includes broader technology-enabled touchpoints through which audiences interact with sports brands.

Sports brand development is also closely linked with sponsorship, co-branding, and commercial partnerships. Professional sports organizations rarely operate as isolated brands; instead, they participate in networks that include sponsors, apparel companies, media organizations, athletes, public institutions, and commercial partners. Co-branding arrangements can create reciprocal value when the identities and market positions of the participating brands are strategically aligned [16]. Social media can amplify these relationships because sponsored content, athlete endorsements, collaborative campaigns, and interactive promotions can be distributed rapidly and targeted toward specific audience segments. Similarly, sports event sponsorship can influence corporate brand image in digital environments, particularly when social media expands the visibility and interaction surrounding sponsorship activities [17]. Emerging technologies can further influence the effectiveness of sports advertising by shaping brand loyalty and consumers' intentions to purchase sponsored products [18].

The broader sports product market also demonstrates the importance of brand reputation, perceived value, and consumer preference. Consumers frequently evaluate branded sports products based on quality, familiarity, image, trust, symbolic value, and prior brand experiences [6, 19]. Branding models developed for sports products suggest that successful brand development requires the coordinated management of multiple internal and external determinants rather than isolated promotional activities [20]. Although evidence from non-sports sectors also indicates that consumer brand preference and willingness to pay can vary substantially according to perceived brand attributes and value propositions, such findings reinforce the broader principle that brand choice is multidimensional and sensitive to how value is communicated [21]. In the sports context, social media offers a powerful environment for shaping these perceptions because it allows sports brands to

communicate product value, identity, community, and experiential benefits simultaneously.

Brand development is also influenced by internal organizational factors. A coherent external sports brand often depends on the quality of internal branding, employee engagement, managerial alignment, and human resource practices. Research in public sports organizations indicates that internal branding can influence work engagement and employee-related outcomes [22]. Similarly, the development of a strong human resource brand within sports organizations requires systematic attention to managerial and organizational factors that strengthen institutional attractiveness and credibility [23]. These internal dimensions are important because the credibility of external social media communication can be weakened when there is a disconnect between the brand promises communicated to audiences and the actual organizational culture, practices, and stakeholder experiences. Therefore, an integrated sports branding model should acknowledge that external social media activities are embedded in broader organizational capabilities.

Sports brands also operate within national, international, and geopolitical contexts. The branding of leagues and organizations across foreign markets often requires adaptation to cultural differences while retaining a coherent core identity. Bicultural brand positioning has been identified as an important strategy for sports leagues seeking to enter international markets because it allows brands to balance global consistency with local cultural relevance [24]. Athlete brands can similarly contribute to the internationalization of professional leagues by serving as culturally recognizable and commercially attractive points of connection for foreign audiences [12]. At the national level, sport can also contribute to soft power and national branding, with sports diplomacy functioning as a mechanism through which countries seek to strengthen international image and reputation [25]. These findings broaden the meaning of sports branding beyond commercial promotion and show that brand development can operate simultaneously at the individual, organizational, league, and national levels.

The integration of social, cultural, and ideological values can also shape sports marketing strategies. Models developed in specific cultural contexts indicate that sports marketing may reflect religious, social, institutional, and cultural principles in addition to conventional commercial objectives [26]. This observation is important because social media platforms expose sports brands to diverse audiences

with differing values, expectations, and interpretations. Effective brand development therefore requires sensitivity to cultural and contextual variation rather than universal application of standardized branding strategies. The international and networked nature of digital sport markets makes this particularly relevant, as online audiences may simultaneously include local supporters, international fans, commercial stakeholders, and culturally diverse communities.

Network-based marketing processes further strengthen the importance of community formation in sports branding. Digital networks can facilitate the creation of interconnected communities around products, athletes, clubs, and events, thereby extending the influence of sports brands beyond conventional advertising channels [27]. These networks can increase visibility, stimulate word-of-mouth, support brand advocacy, and create commercial opportunities when audiences actively participate in content distribution and community growth. In this sense, the effectiveness of social media branding depends not only on what the sports organization publishes but also on how content circulates through networks and how users reinterpret, share, and co-create the brand.

Despite the expanding literature on these themes, the current body of knowledge remains fragmented. Existing studies often focus on individual elements such as athlete branding, sponsorship, social media personalization, consumer purchase behavior, internal branding, fan communities, brand tribes, technology adoption, or international market positioning. Research has demonstrated the importance of athlete image and emotional attachment [5], athlete personal branding [9], sports applications [15], sponsorship and co-branding [16], and sports marketing models [26], yet these factors are frequently examined independently. Similarly, studies of social media marketing have highlighted brand experience and digital engagement [1, 7], but fewer studies have explained the full structural sequence through which social media capabilities lead to content strategy, fan engagement, brand-building mechanisms, and broader sports brand development.

This fragmentation represents a significant theoretical and managerial gap. Sports organizations require an integrated framework that explains not only which factors matter but also how they interact and through what mechanisms social media activities generate brand development. A model that treats social media capability as a foundational resource, content strategy as a strategic communication mechanism, fan engagement as a relational

mechanism, and brand-building mechanisms as proximal determinants of brand development may provide a more comprehensive explanation of digital sports branding. Such a framework is particularly necessary as technological change, generative AI, platform dependence, athlete commercialization, and global audience participation continue to reshape the sports industry [3, 10, 13].

Moreover, the increasingly competitive environment of sports consumption requires brands to establish strong differentiation, credibility, authenticity, and emotional relevance. University sports participation has been shown to be influenced by perceptions of brand authenticity and brand equity, illustrating the broader importance of authenticity-related brand processes in sports environments [28]. In parallel, professional and commercial sports brands must maintain reputational strength if they are to encourage consumer choice and loyalty [6]. These outcomes cannot be achieved through isolated social media campaigns. Rather, they depend on the coordinated development of technological capacity, strategically designed content, sustained interaction, community-building, and mechanisms that strengthen awareness, image, associations, perceived value, loyalty, and relationship quality.

Accordingly, there is a need for an empirically validated framework that integrates these dispersed perspectives and provides a coherent explanation of how sports brands develop through social media. Such a framework should be theoretically grounded in the accumulated literature, refined through expert judgment, and empirically examined using robust multivariate techniques. By combining evidence regarding athlete branding, organizational branding, digital technologies, fan engagement, sponsorship, consumer behavior, internationalization, and social media communication, a comprehensive model can provide both theoretical consolidation and practical guidance for managers seeking to develop sustainable sports brands in increasingly digital markets.

Therefore, the aim of this study was to design and empirically validate an integrated model of sports brand development through social media by identifying its principal dimensions and components and examining the structural relationships among social media capabilities, content strategy, fan engagement, brand-building mechanisms, and sports brand development.

2. Methodology

2.1. Study Design and Participants

This study employed a sequential exploratory mixed-methods design to develop and empirically validate an integrated model for sports brand development through social media. The mixed-methods approach was considered appropriate because sports brand development in contemporary digital environments represents a complex and multidimensional phenomenon involving technological capabilities, communication strategies, audience interactions, brand-building processes, and organizational outcomes. Therefore, relying exclusively on either qualitative or quantitative methods would not provide sufficient conceptual depth or empirical validation. The research process was consequently organized into three consecutive and complementary phases comprising meta-synthesis for conceptual model development, the Fuzzy Delphi Method for expert validation and refinement, and Partial Least Squares Structural Equation Modeling for empirical assessment of the final model. The sequential structure allowed the findings obtained from each stage to inform the subsequent phase and ensured that the quantitative model was grounded in both the existing scientific literature and expert judgment.

The first phase consisted of a systematic meta-synthesis designed to identify the theoretical foundations, dimensions, components, and indicators associated with sports brand development through social media. The systematic review process was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses, or PRISMA 2020, guidelines (Page et al., 2021). Relevant studies published between January 2010 and December 2025 were searched in major international scientific databases, including Scopus, Web of Science, ScienceDirect, Emerald Insight, SpringerLink, and Google Scholar. The search strategy incorporated combinations of keywords and Boolean operators such as AND and OR to maximize the comprehensiveness and relevance of retrieved publications. The principal search terms included “Sports Brand,” “Sports Branding,” “Brand Development,” “Social Media Marketing,” “Digital Branding,” “Fan Engagement,” “Brand Equity,” and “Sports Marketing,” along with relevant combinations of these concepts. Studies were considered eligible when they had been published in peer-reviewed scholarly journals, addressed sports branding, digital branding, social media marketing, fan engagement, or closely related branding phenomena within a sports context,

were published in English, and presented either empirical evidence or theoretical contributions relevant to the objectives of the study. Conference proceedings, dissertations, unpublished reports, publications unrelated to sport, duplicate records, and studies with insufficient methodological quality or limited relevance to the research objectives were excluded.

The initial systematic search yielded 1,148 records. Following the removal of duplicate publications and the screening of titles and abstracts, 236 studies were retained for full-text assessment. The full texts were subsequently evaluated according to the predefined eligibility and methodological quality criteria, resulting in the inclusion of 58 studies in the final meta-synthesis. The synthesis procedure was based on the approach proposed by Sandelowski and Barroso (2007). The selected studies were subjected to systematic qualitative coding through open, axial, and selective coding procedures. Open coding resulted in the identification of 186 primary concepts associated with social-media-based sports branding. During axial coding, conceptually similar codes were compared, integrated, and classified into 43 components. Selective coding was then conducted to identify broader conceptual relationships among the components, leading to the development of five overarching dimensions: Social Media Capabilities, Content Strategy, Fan Engagement, Brand-Building Mechanisms, and Sports Brand Development. These dimensions constituted the preliminary conceptual framework that was subsequently submitted to expert evaluation.

The second phase employed the Fuzzy Delphi Method to evaluate, refine, and validate the components identified during the meta-synthesis. Purposive sampling was used because participation required specialized knowledge and professional experience in the fields directly related to the proposed model. The expert panel consisted of 18 individuals, including 10 university professors specializing in sports management, five specialists in sports marketing, and three senior managers working in sports organizations. Eligibility for participation required possession of a doctoral degree, at least five years of relevant academic, managerial, or professional experience, and a demonstrated record of scholarly publication or executive involvement in sports management, sports marketing, branding, or social media marketing. The inclusion of experts from both academic and professional backgrounds was intended to ensure that the proposed model reflected theoretical knowledge as well as practical requirements within the sports industry.

The Fuzzy Delphi process was conducted over two rounds. Experts evaluated the relevance and importance of the dimensions and components identified through the meta-synthesis, and their judgments were used to determine whether each component should be retained in the final framework. Consensus was evaluated according to the procedure proposed by Cheng and Lin (2002), using the fuzzy threshold distance, the percentage of expert agreement, and the defuzzification value. A component was considered acceptable when the threshold value was equal to or lower than 0.20, the level of expert agreement was at least 75%, and the defuzzification value was equal to or greater than 0.50. After completion of the two Delphi rounds, 38 of the original 43 components satisfied the predetermined consensus criteria and were retained in the model, whereas five components were removed because they did not achieve an adequate level of expert agreement.

The third phase constituted the quantitative component of the study and was conducted to empirically validate the conceptual model developed through the meta-synthesis and Fuzzy Delphi phases. The target population included sports managers, sports marketing professionals, digital marketing specialists, and administrative personnel employed in sports clubs, federations, and other organizations involved in sports-related branding and marketing activities. Because the target population was relatively large and geographically dispersed, the minimum sample size was determined using Cochran's sample size formula. At a 95% confidence level and a 5% margin of error, the minimum required sample was estimated at 384 respondents. To compensate for possible nonresponse, incomplete questionnaires, and unusable responses, 450 questionnaires were distributed among eligible participants. Following data screening and the removal of questionnaires with substantial missing information or other response-quality problems, 412 valid questionnaires remained for quantitative analysis. This represented a usable response rate of approximately 91.6% and exceeded the minimum sample size required for the statistical procedures employed in the study.

2.2. Data Collection Tools

Data were collected using different instruments corresponding to the three successive phases of the research. During the meta-synthesis phase, the principal data source consisted of the full texts of the 58 scientific studies that satisfied the systematic review eligibility criteria. A structured extraction and coding framework was applied to

record bibliographic characteristics, theoretical concepts, branding mechanisms, social media variables, fan-related variables, and reported relationships relevant to sports brand development. The extracted information was systematically coded using qualitative analysis procedures. The coding process began with the identification of meaningful conceptual units within each study and progressed through comparison, categorization, and abstraction until the principal components and higher-order dimensions of the preliminary model were established. The use of systematic coding across multiple studies enabled the integration of fragmented findings in the existing literature into a coherent conceptual structure.

In the Fuzzy Delphi phase, a structured researcher-developed questionnaire was prepared on the basis of the dimensions and components identified through the meta-synthesis. The questionnaire was designed to measure expert judgments concerning the importance and relevance of each proposed component for explaining sports brand development through social media. Experts rated each component using a five-point linguistic scale ranging from Very Low Importance to Very High Importance. The linguistic responses were subsequently transformed into corresponding triangular fuzzy numbers to account for uncertainty and ambiguity in expert judgments and to permit fuzzy mathematical analysis. The questionnaire was administered in two consecutive Delphi rounds. Feedback from the first round was incorporated into the second-round evaluation so that expert judgments could converge progressively toward an acceptable level of consensus. Components failing to satisfy the fuzzy consensus criteria were eliminated, whereas those meeting all predetermined thresholds were retained for construction of the quantitative measurement instrument.

For the quantitative phase, a researcher-developed questionnaire was constructed directly from the 38 components retained following the Fuzzy Delphi analysis. The final instrument contained 38 items representing the five principal constructs of the proposed model. Social Media Capabilities was measured using eight items reflecting the technological, interactive, analytical, and communication capacities of social media platforms that can support sports branding activities. Content Strategy was represented by seven items addressing the planning, quality, relevance, consistency, creativity, and strategic delivery of sports-related digital content. Fan Engagement was assessed through eight items reflecting interaction, participation, emotional involvement, communication, responsiveness,

and the development of relationships between sports brands and their audiences. Brand-Building Mechanisms were measured using nine items covering the processes through which social media activities contribute to brand awareness, brand associations, brand identity, brand image, perceived value, loyalty, and other brand-related outcomes. Sports Brand Development was measured using six items representing the overall strengthening, differentiation, sustainability, visibility, and market development of the sports brand. Responses to all quantitative items were recorded on a five-point Likert scale ranging from 1, Strongly Disagree, to 5, Strongly Agree.

Several procedures were applied to establish the validity and reliability of the quantitative instrument. Content validity had initially been supported through the meta-synthesis and was subsequently evaluated more formally through expert judgment during the Delphi phase. The Content Validity Ratio and Content Validity Index were calculated for all items included in the final instrument. All retained items exceeded the predetermined acceptable thresholds of CVR greater than 0.62 and CVI greater than 0.80, indicating adequate relevance, clarity, and representativeness of the questionnaire items. Construct validity was subsequently evaluated within the PLS-SEM measurement model. Indicator reliability was assessed using standardized outer factor loadings, with loadings of 0.70 or greater considered desirable evidence that individual indicators adequately represented their corresponding latent constructs. Internal consistency reliability was assessed using both Cronbach's alpha and Composite Reliability, with coefficients above 0.70 considered acceptable.

Convergent validity was assessed through the Average Variance Extracted for each latent construct. AVE values greater than 0.50 were considered evidence that a construct explained more than half of the variance in its observed indicators and therefore demonstrated adequate convergence. Discriminant validity was evaluated using both the Fornell–Larcker criterion and the Heterotrait–Monotrait ratio of correlations. Under the Fornell–Larcker criterion, the square root of the AVE for each construct was expected to exceed its correlations with the remaining constructs. HTMT values below 0.85 were considered indicative of satisfactory discriminant validity. The simultaneous assessment of indicator reliability, internal consistency, convergent validity, and discriminant validity provided a comprehensive evaluation of the psychometric properties of the researcher-developed measurement

instrument prior to interpretation of the structural relationships in the proposed model.

2.3. Data Analysis

Data analysis was performed separately for each research phase using software and analytical techniques appropriate to the nature of the data. In the meta-synthesis phase, MAXQDA 2024 was used to organize the selected studies and conduct systematic qualitative coding. The analysis proceeded through open, axial, and selective coding. During open coding, meaningful concepts related to social media capabilities, digital content, fan behavior, branding processes, and sports brand outcomes were identified from the selected literature. In the axial coding stage, conceptually similar codes were compared and integrated into broader categories and components. Selective coding was then employed to establish relationships among these categories and to organize them into higher-order conceptual dimensions. This process resulted in 186 initial concepts, which were reduced to 43 components and subsequently organized into five overarching dimensions. Continuous comparison between codes and source studies was performed throughout the process to enhance conceptual consistency and prevent the unnecessary duplication of constructs.

Microsoft Excel was used to perform the mathematical calculations required for the Fuzzy Delphi phase. Experts' linguistic evaluations were first converted into triangular fuzzy numbers, after which fuzzy aggregation procedures were performed to determine the collective judgment of the expert panel for each component. The threshold distance between expert judgments, percentage of agreement, and defuzzified score were subsequently calculated. Components were retained only when the threshold value was equal to or below 0.20, expert consensus reached at least 75%, and the defuzzification score was equal to or greater than 0.50. Components failing to satisfy one or more of these criteria were reconsidered in the subsequent Delphi round or removed from the model. Two rounds were sufficient to achieve the required level of convergence among expert evaluations, resulting in the retention of 38 components for the quantitative validation phase.

Quantitative data were initially entered and screened using SPSS version 29. Descriptive statistical procedures were employed to summarize the characteristics of the study participants and the distributional properties of the principal research variables. Data screening included examination of

missing values, response completeness, and potentially unusable questionnaires before inferential analyses were undertaken. Following preliminary screening, the measurement and structural models were examined using SmartPLS 4.0. The Partial Least Squares approach to Structural Equation Modeling was selected because the study was primarily prediction-oriented and aimed to validate a relatively complex integrated model containing multiple latent variables and indicators. PLS-SEM also provides flexibility for analyzing models involving numerous simultaneous relationships while placing fewer restrictions on multivariate distributional assumptions than covariance-based structural equation modeling.

The PLS-SEM procedure was conducted according to the two-stage assessment process recommended by Hair et al. (2022). The first stage involved assessment of the measurement model to establish the reliability and validity of the latent constructs before the structural paths were interpreted. Indicator loadings were first examined, followed by the assessment of Cronbach's alpha, Composite Reliability, Average Variance Extracted, the Fornell–Larcker criterion, and the Heterotrait–Monotrait ratio. Factor loadings and reliability coefficients of at least 0.70, AVE values greater than 0.50, and HTMT ratios below 0.85 were considered evidence of satisfactory measurement quality. Only after adequate measurement-model reliability and validity had been established was the structural model evaluated.

Structural model assessment focused on the magnitude, direction, and statistical significance of hypothesized relationships among Social Media Capabilities, Content Strategy, Fan Engagement, Brand-Building Mechanisms, and Sports Brand Development. Path coefficients were reported using standardized beta coefficients, and the statistical significance of direct and indirect effects was evaluated using a nonparametric bootstrapping procedure with 5,000 resamples. The corresponding t-values and p-values were examined, with statistical significance established at $p < .05$. The explanatory power of the model was evaluated using the coefficient of determination, R^2 , for endogenous constructs. Predictive relevance was assessed using Stone–Geisser's Q^2 statistic, with values greater than zero interpreted as evidence that the model possessed predictive relevance for the respective endogenous construct. The magnitude of the contribution of individual exogenous constructs was additionally evaluated through effect-size coefficients, f^2 , to determine the extent to which

removal of a predictor would influence the explained variance of an endogenous construct.

The overall adequacy of the estimated PLS model was further evaluated using the Standardized Root Mean Square Residual and the Normed Fit Index. SRMR was used to assess the standardized discrepancy between observed and model-implied correlations, whereas NFI provided supplementary information concerning the overall fit of the proposed model relative to a null model. These indices were interpreted alongside the measurement-model criteria, structural path coefficients, R^2 values, Q^2 values, and effect sizes rather than as isolated indicators of model adequacy. The combined use of MAXQDA 2024 for qualitative synthesis, Microsoft Excel for Fuzzy Delphi calculations, SPSS 29 for preliminary and descriptive analyses, and SmartPLS 4.0 for measurement and structural model assessment provided a systematic analytical framework for developing, refining, and empirically validating the integrated model of sports brand development through social media.

3. Findings and Results

Following the screening of the returned questionnaires, 412 responses were considered complete and suitable for quantitative analysis. The demographic profile of the respondents indicated that the sample represented a relatively diverse group of professionals involved in sports management, sports marketing, digital marketing, and administrative activities within sports organizations. Of the 412 respondents, 279 participants were male, accounting for 67.7% of the sample, while 133 participants were female, representing 32.3%. Regarding age, 74 respondents, or 18.0%, were younger than 30 years, 151 respondents, or 36.7%, were between 30 and 39 years, 124 respondents, or

30.1%, were between 40 and 49 years, and 63 respondents, or 15.3%, were 50 years of age or older. Therefore, the majority of respondents were between 30 and 49 years of age, indicating that the quantitative sample was predominantly composed of individuals in the middle stages of their professional careers.

In terms of educational attainment, 118 participants, representing 28.6% of the sample, held a bachelor's degree, 202 participants, representing 49.0%, held a master's degree, and 92 participants, representing 22.3%, held a doctoral degree. These findings demonstrate that more than two-thirds of the respondents possessed postgraduate qualifications, which was considered appropriate given the specialized nature of sports branding and social media marketing. With regard to professional experience, 84 respondents, or 20.4%, reported fewer than five years of relevant experience, 136 respondents, or 33.0%, reported between five and ten years of experience, 109 respondents, or 26.5%, reported between 11 and 15 years, and 83 respondents, or 20.1%, had more than 15 years of professional experience. Thus, approximately 79.6% of the sample had at least five years of professional experience.

The occupational distribution of the respondents also demonstrated adequate representation of the principal professional groups targeted by the study. A total of 129 respondents, equivalent to 31.3%, were sports managers, 105 respondents, or 25.5%, were sports marketing professionals, 91 respondents, or 22.1%, were digital marketing specialists, and 87 respondents, or 21.1%, were administrators or senior personnel working in sports clubs, federations, and related organizations. Overall, the demographic findings suggested that the quantitative sample possessed an appropriate combination of managerial, marketing, technological, and sports-sector experience for the empirical assessment of the proposed integrated model.

Table 1. Dimensions and Components of the Integrated Model Extracted Through Meta-Synthesis and Retained Following Expert Validation

Dimension	Code	Retained Component	Conceptual Emphasis
Social Media Capabilities	SMC1	Platform technological capability	Ability of social media platforms to support sophisticated branding and communication functions
Social Media Capabilities	SMC2	Multi-platform presence	Strategic presence across multiple relevant social networking platforms
Social Media Capabilities	SMC3	Data analytics capability	Collection and interpretation of audience and campaign data
Social Media Capabilities	SMC4	Real-time communication	Capacity for immediate interaction and information dissemination
Social Media Capabilities	SMC5	Social listening	Monitoring of audience opinions, conversations, trends, and brand-related discussions
Social Media Capabilities	SMC6	Personalization capability	Customization of content and communication according to audience characteristics
Social Media Capabilities	SMC7	Digital network integration	Integration of social media with other digital and organizational communication channels
Social Media Capabilities	SMC8	Responsiveness and agility	Ability to rapidly respond to emerging issues, trends, and audience needs

Content Strategy	CS1	Content quality	Accuracy, professionalism, attractiveness, and technical quality of published content
Content Strategy	CS2	Content relevance	Alignment of content with fan interests, expectations, and sports-related needs
Content Strategy	CS3	Content consistency	Consistency of brand message, tone, identity, and publication pattern
Content Strategy	CS4	Content creativity	Use of innovative and distinctive content formats and ideas
Content Strategy	CS5	Storytelling	Use of narratives to communicate brand meaning, identity, heritage, and values
Content Strategy	CS6	Multimedia richness	Strategic use of images, video, live streaming, graphics, and interactive formats
Content Strategy	CS7	Strategic content scheduling	Timely distribution of content based on events, audience activity, and communication objectives
Fan Engagement	FE1	Fan interaction	Frequency and quality of two-way interactions between the sports brand and fans
Fan Engagement	FE2	Fan participation	Active contribution of fans to digital activities, campaigns, and brand-related experiences
Fan Engagement	FE3	Emotional involvement	Emotional attachment and affective involvement generated through digital interactions
Fan Engagement	FE4	Online community participation	Development and participation of fans in social-media-based brand communities
Fan Engagement	FE5	Electronic word-of-mouth	Voluntary sharing and recommendation of brand-related content and experiences
Fan Engagement	FE6	User-generated content	Production of brand-related digital content by fans and followers
Fan Engagement	FE7	Fan-brand dialogue	Continuous reciprocal communication between the sports organization and its audience
Fan Engagement	FE8	Co-creation	Involvement of fans in developing brand meanings, experiences, campaigns, or content
Brand-Building Mechanisms	BBM1	Brand awareness	Enhancement of recognition and recall of the sports brand
Brand-Building Mechanisms	BBM2	Brand image	Development of favorable perceptions and overall impressions of the brand
Brand-Building Mechanisms	BBM3	Brand associations	Formation of meaningful cognitive and emotional associations with the sports brand
Brand-Building Mechanisms	BBM4	Brand identity communication	Effective communication of the brand's values, personality, heritage, and identity
Brand-Building Mechanisms	BBM5	Brand credibility	Strengthening audience perceptions of trustworthiness and authenticity
Brand-Building Mechanisms	BBM6	Brand differentiation	Establishment of distinctive characteristics relative to competing sports brands
Brand-Building Mechanisms	BBM7	Perceived brand value	Enhancement of the value attributed to the brand by fans and stakeholders
Brand-Building Mechanisms	BBM8	Brand loyalty formation	Strengthening commitment, preference, and continued support toward the brand
Brand-Building Mechanisms	BBM9	Brand relationship quality	Development of durable, meaningful, and mutually beneficial fan-brand relationships
Sports Brand Development	SBD1	Brand visibility	Expansion of the brand's exposure and presence in relevant markets and digital spaces
Sports Brand Development	SBD2	Brand strength	Improvement in the overall competitive strength and market position of the sports brand
Sports Brand Development	SBD3	Brand equity development	Improvement in the cumulative value attached to the sports brand
Sports Brand Development	SBD4	Market expansion	Expansion of the brand's audience, commercial reach, and market opportunities
Sports Brand Development	SBD5	Sustainable brand growth	Long-term development and maintenance of favorable brand outcomes
Sports Brand Development	SBD6	Competitive brand positioning	Establishment of a distinctive and advantageous position within the sports marketplace

Table 1 presents the final conceptual structure obtained through the integration of the meta-synthesis and expert-validation phases. The initial coding of the 58 eligible studies produced 186 primary concepts. Through continuous comparison and axial coding, overlapping and conceptually similar codes were consolidated into 43 initial components. Selective coding subsequently organized these components into five higher-order dimensions comprising Social Media

Capabilities, Content Strategy, Fan Engagement, Brand-Building Mechanisms, and Sports Brand Development. Following Fuzzy Delphi evaluation, five components failed to satisfy the predefined consensus criteria and were removed, leaving 38 components in the final framework. Social Media Capabilities contained eight components relating primarily to the technological, analytical, interactive, and responsive characteristics required for

effective social media use. Content Strategy contained seven components representing the strategic and creative management of digital content. Fan Engagement contained eight components encompassing behavioral, emotional, communicative, and co-creative forms of audience involvement. Brand-Building Mechanisms constituted the largest dimension and included nine components reflecting the principal processes through which social media activities may translate into branding outcomes. Finally, Sports Brand Development contained six components describing higher-

level branding outcomes including visibility, brand strength, equity, market expansion, sustainable growth, and competitive positioning. The resulting framework therefore suggested that sports brand development through social media should not be interpreted as the direct consequence of social media presence alone, but rather as the outcome of a sequential and interconnected process involving organizational digital capabilities, strategic content management, fan engagement, and brand-building mechanisms.

Table 2. Results of the Fuzzy Delphi Validation of the Proposed Dimensions

Dimension	Initial Components	Components Retained	Mean Threshold Value (d)	Expert Agreement (%)	Defuzzification Value	Decision
Social Media Capabilities	9	8	0.114	91.7	0.842	Retained
Content Strategy	8	7	0.121	90.3	0.826	Retained
Fan Engagement	9	8	0.109	93.1	0.858	Retained
Brand-Building Mechanisms	10	9	0.118	92.6	0.849	Retained
Sports Brand Development	7	6	0.096	94.4	0.873	Retained
Overall Model	43	38	0.112	92.4	0.850	Accepted

The Fuzzy Delphi results shown in Table 2 confirmed a high level of agreement among the 18 experts regarding the conceptual dimensions and retained components of the proposed model. The mean threshold distance for all five dimensions remained substantially below the maximum acceptable value of 0.20, ranging from 0.096 for Sports Brand Development to 0.121 for Content Strategy. This finding indicated a relatively low degree of dispersion among expert judgments and therefore demonstrated convergence in the experts' assessments of component importance. Expert agreement exceeded the required criterion of 75% for every dimension, ranging from 90.3% for Content Strategy to 94.4% for Sports Brand Development. The overall expert agreement across the model was 92.4%, providing strong evidence of consensus regarding the relevance of the proposed conceptual framework. Similarly, all defuzzification values were well

above the minimum acceptance criterion of 0.50, with values ranging from 0.826 to 0.873. Sports Brand Development obtained the highest defuzzification score of 0.873, suggesting that experts attached particularly high importance to the outcome dimension of the model. Fan Engagement and Brand-Building Mechanisms also obtained relatively high scores of 0.858 and 0.849, respectively, indicating that experts viewed these constructs as central mechanisms linking social media activities to sports brand development. After two Delphi rounds, 38 of the original 43 components satisfied all three criteria simultaneously and were retained. The remaining five components were excluded because their individual assessments failed to achieve sufficient consensus, indicating that the final model was not merely derived from the literature but had also undergone systematic refinement through specialized expert judgment.

Table 3. Measurement Model Assessment: Indicator Loadings, Internal Consistency Reliability, and Convergent Validity

Construct	Indicator	Outer Loading	Cronbach's Alpha	Composite Reliability	AVE
Social Media Capabilities	SMC1	0.812	0.912	0.929	0.621
	SMC2	0.778			
	SMC3	0.836			
	SMC4	0.791			
	SMC5	0.805			
	SMC6	0.761			
	SMC7	0.774			

	SMC8	0.746			
Content Strategy	CS1	0.829	0.903	0.923	0.632
	CS2	0.804			
	CS3	0.781			
	CS4	0.816			
	CS5	0.798			
	CS6	0.763			
	CS7	0.771			
Fan Engagement	FE1	0.843	0.925	0.939	0.659
	FE2	0.817			
	FE3	0.851			
	FE4	0.789			
	FE5	0.826			
	FE6	0.784			
	FE7	0.809			
	FE8	0.768			
Brand-Building Mechanisms	BBM1	0.842	0.938	0.948	0.668
	BBM2	0.826			
	BBM3	0.801			
	BBM4	0.837			
	BBM5	0.785			
	BBM6	0.814			
	BBM7	0.832			
	BBM8	0.809			
	BBM9	0.798			
Sports Brand Development	SBD1	0.861	0.918	0.936	0.708
	SBD2	0.846			
	SBD3	0.878			
	SBD4	0.817			
	SBD5	0.833			
	SBD6	0.809			

The measurement-model results presented in Table 3 demonstrated satisfactory indicator reliability, internal consistency, and convergent validity across all five latent constructs. The standardized outer loadings of the 38 indicators ranged from 0.746 to 0.878 and therefore exceeded the commonly recommended threshold of 0.70. The lowest loading was obtained for SMC8, representing responsiveness and agility, with a loading of 0.746, while the highest loading was observed for SBD3, representing brand equity development, with a loading of 0.878. Consequently, no indicator required elimination from the measurement model on the basis of inadequate factor loading. Cronbach's alpha coefficients ranged from 0.903 for Content Strategy to 0.938 for Brand-Building Mechanisms, indicating strong internal consistency among the indicators forming each construct. Composite Reliability values ranged from 0.923 to 0.948, exceeding the recommended minimum level of

0.70 while remaining within an acceptable range that did not indicate excessive item redundancy. These findings confirmed that the indicators consistently measured their intended constructs. Convergent validity was also supported because all Average Variance Extracted values exceeded the recommended threshold of 0.50. AVE values ranged from 0.621 for Social Media Capabilities to 0.708 for Sports Brand Development, demonstrating that each latent variable explained considerably more than half of the variance in its respective observed indicators. Sports Brand Development displayed the highest convergent validity, whereas Social Media Capabilities displayed the lowest AVE; nevertheless, its value of 0.621 remained clearly above the acceptance criterion. Taken together, these results provided strong evidence that the measurement instrument possessed satisfactory psychometric properties and was appropriate for subsequent evaluation of the structural model.

Table 4. Discriminant Validity Assessment Using the Fornell–Larcker Criterion and HTMT Ratios

Panel A. Fornell–Larcker Criterion					
Construct	SMC	CS	FE	BBM	SBD
Social Media Capabilities (SMC)	0.788				
Content Strategy (CS)	0.620	0.795			
Fan Engagement (FE)	0.604	0.713	0.812		
Brand-Building Mechanisms (BBM)	0.571	0.649	0.742	0.817	
Sports Brand Development (SBD)	0.526	0.614	0.704	0.781	0.841
Panel B. Heterotrait–Monotrait Ratio					
Construct Pair	HTMT				
SMC–CS	0.681				
SMC–FE	0.657				
SMC–BBM	0.619				
SMC–SBD	0.574				
CS–FE	0.781				
CS–BBM	0.709				
CS–SBD	0.668				
FE–BBM	0.812				
FE–SBD	0.769				
BBM–SBD	0.836				

Table 4 reports the discriminant validity of the constructs using both the Fornell–Larcker criterion and the Heterotrait–Monotrait ratio. The diagonal values in Panel A represent the square roots of the AVE for each construct. These values ranged from 0.788 for Social Media Capabilities to 0.841 for Sports Brand Development. For each construct, the square root of the AVE exceeded its correlations with all other constructs, thereby satisfying the Fornell–Larcker criterion. For example, the square root of the AVE for Brand-Building Mechanisms was 0.817, which was greater than its strongest interconstruct correlation of 0.781 with Sports Brand Development. Similarly, the square root of the AVE for Fan Engagement was 0.812, exceeding its correlation of 0.742 with Brand-Building Mechanisms and 0.713 with Content Strategy. These results indicated that each construct shared more variance with its own indicators than with the other constructs included in the model. The HTMT analysis

provided additional support for discriminant validity. All pairwise HTMT ratios remained below the conservative threshold of 0.85, ranging from 0.574 for the relationship between Social Media Capabilities and Sports Brand Development to 0.836 for the relationship between Brand-Building Mechanisms and Sports Brand Development. Although the BBM–SBD ratio was comparatively high, it remained below the predefined cutoff of 0.85, suggesting that Brand-Building Mechanisms and Sports Brand Development represented related but empirically distinguishable constructs. The combined results of the Fornell–Larcker and HTMT assessments therefore confirmed that discriminant validity was adequately established and that the five latent variables measured distinct conceptual domains within the integrated sports branding model.

Table 5. Structural Model Results, Explanatory Power, Predictive Relevance, and Overall Model Fit

Structural Relationship	β	Standard Error	t	p	f ²	Decision
Social Media Capabilities → Content Strategy	0.620	0.041	15.122	< .001	0.624	Supported
Social Media Capabilities → Fan Engagement	0.312	0.047	6.638	< .001	0.151	Supported
Content Strategy → Fan Engagement	0.519	0.044	11.795	< .001	0.417	Supported
Social Media Capabilities → Brand-Building Mechanisms	0.176	0.046	3.826	< .001	0.054	Supported
Content Strategy → Brand-Building Mechanisms	0.241	0.048	5.021	< .001	0.091	Supported
Fan Engagement → Brand-Building Mechanisms	0.493	0.043	11.465	< .001	0.326	Supported
Content Strategy → Sports Brand Development	0.137	0.043	3.186	.001	0.036	Supported
Fan Engagement → Sports Brand Development	0.207	0.046	4.500	< .001	0.076	Supported
Brand-Building Mechanisms → Sports Brand Development	0.581	0.041	14.171	< .001	0.468	Supported
Endogenous Construct	R ²	Adjusted R ²		Q ²		

Content Strategy	0.384	0.382	0.248
Fan Engagement	0.624	0.621	0.392
Brand-Building Mechanisms	0.692	0.689	0.448
Sports Brand Development	0.741	0.739	0.501
Overall Fit Index	Obtained Value	Interpretation	
SRMR	0.061	Acceptable fit	
NFI	0.918	Acceptable fit	

The structural model results reported in Table 5 provided empirical support for all proposed relationships. Social Media Capabilities exerted a strong positive effect on Content Strategy ($\beta = 0.620$, $t = 15.122$, $p < .001$), indicating that sports organizations possessing stronger technological, analytical, interactive, and responsive social media capabilities were considerably more likely to implement effective content strategies. This relationship also produced a large effect size of $f^2 = 0.624$, making it one of the most substantial effects observed in the model. Social Media Capabilities also directly predicted Fan Engagement ($\beta = 0.312$, $t = 6.638$, $p < .001$), while Content Strategy had an even stronger effect on Fan Engagement ($\beta = 0.519$, $t = 11.795$, $p < .001$). These two constructs jointly explained 62.4% of the variance in Fan Engagement, demonstrating that fan involvement in social media environments depended substantially on both the underlying digital capabilities of the organization and the strategic quality of the content delivered to audiences.

The antecedents of Brand-Building Mechanisms were also statistically significant. Social Media Capabilities had a positive but comparatively modest direct effect on Brand-Building Mechanisms ($\beta = 0.176$, $t = 3.826$, $p < .001$), whereas Content Strategy produced a stronger effect ($\beta = 0.241$, $t = 5.021$, $p < .001$). Fan Engagement was the strongest direct predictor of Brand-Building Mechanisms ($\beta = 0.493$, $t = 11.465$, $p < .001$), with an effect size of $f^2 = 0.326$. These findings indicated that the transformation of social media activities into brand awareness, favorable brand associations, credibility, differentiation, perceived value, loyalty, and relationship quality occurred primarily through the active involvement of fans. Together, Social Media Capabilities, Content Strategy, and Fan Engagement explained 69.2% of the variance in Brand-Building Mechanisms, indicating substantial explanatory power.

With respect to the principal outcome construct, Brand-Building Mechanisms demonstrated the largest direct effect on Sports Brand Development ($\beta = 0.581$, $t = 14.171$, $p <$

.001), followed by Fan Engagement ($\beta = 0.207$, $t = 4.500$, $p < .001$) and Content Strategy ($\beta = 0.137$, $t = 3.186$, $p = .001$). The effect size associated with Brand-Building Mechanisms was $f^2 = 0.468$, indicating that this construct made a substantial contribution to explaining the development of sports brands. The combined predictors accounted for 74.1% of the variance in Sports Brand Development, demonstrating a high level of explanatory power for the final endogenous construct. The adjusted R^2 of 0.739 further indicated that this explanatory capacity remained stable after adjustment for the number of predictors included in the model.

The Stone–Geisser Q^2 values were positive for all endogenous constructs and ranged from 0.248 for Content Strategy to 0.501 for Sports Brand Development. Because all Q^2 values were greater than zero, the model demonstrated predictive relevance for each endogenous variable. Particularly, the Q^2 values of 0.448 for Brand-Building Mechanisms and 0.501 for Sports Brand Development indicated substantial predictive relevance for the downstream branding outcomes of the model. Model fit indices also supported the adequacy of the proposed structural configuration. The SRMR value was 0.061, remaining below the frequently recommended threshold of 0.08, while the NFI value was 0.918, indicating an acceptable level of comparative model fit. Examination of predictor collinearity also indicated that all inner variance inflation factor values remained below 3.0, with values ranging approximately between 1.42 and 2.76, suggesting that multicollinearity did not materially influence the estimation of the structural paths. Overall, the results demonstrated that the proposed model possessed satisfactory explanatory power, predictive relevance, and structural adequacy and provided empirical evidence for the integrated sequence through which social media capabilities and strategic content contribute to fan engagement, brand-building processes, and ultimately sports brand development.

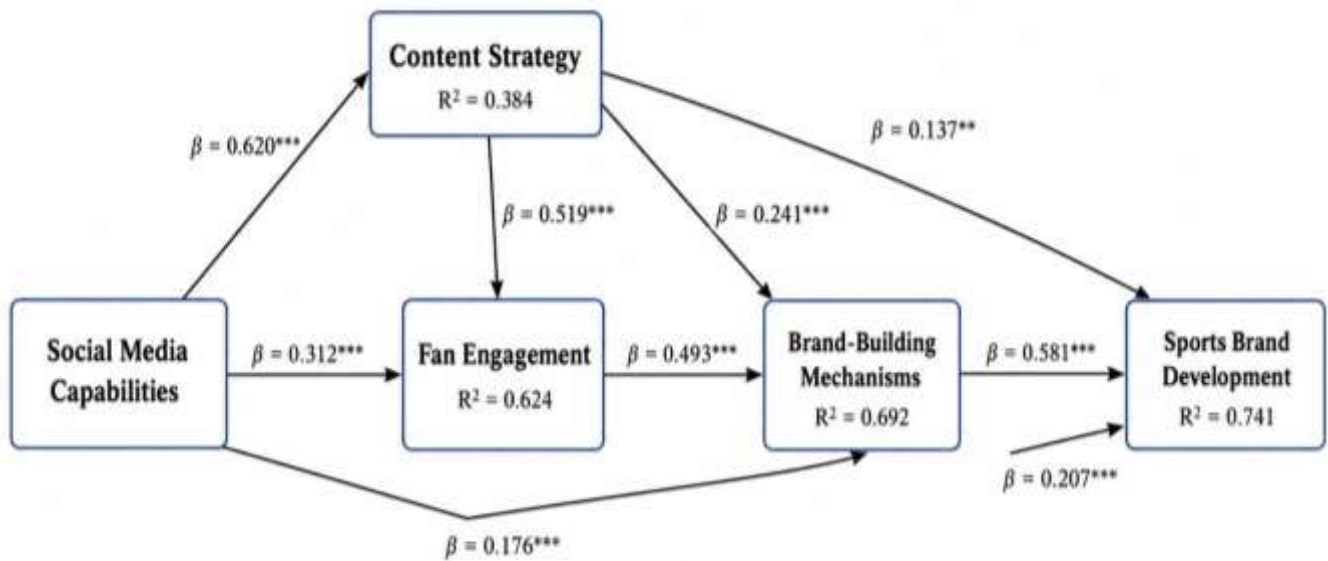


Figure 1. Final Integrated Structural Model of Sports Brand Development Through Social Media

The final structural model illustrated in Figure 1 demonstrates the sequential and interconnected nature of sports brand development in social media environments. The model indicates that Social Media Capabilities function primarily as a foundational organizational resource that enables the development of a stronger Content Strategy and directly facilitates Fan Engagement. Content Strategy, in turn, plays a central intermediary role by transforming technological and organizational social media capacity into meaningful audience-facing communication and by substantially enhancing Fan Engagement. Fan Engagement represents a critical relational mechanism within the model because it provides the strongest direct contribution to Brand-Building Mechanisms among the three upstream constructs. Brand-Building Mechanisms subsequently constitute the principal proximal determinant of Sports Brand Development. The comparatively large path coefficient from Brand-Building Mechanisms to Sports Brand Development confirms that social media activities contribute to sustainable sports brand growth primarily when they successfully generate brand awareness, favorable associations, identity communication, credibility, differentiation, perceived value, loyalty, and high-quality fan-brand relationships. At the same time, the significant direct relationships between Content Strategy and Sports Brand Development and between Fan Engagement and Sports Brand Development indicate that these constructs also contribute to brand development beyond their indirect

influence through Brand-Building Mechanisms. Accordingly, the final empirical model supports an integrated process in which technological capabilities, strategic communication, relational engagement, and brand-building processes operate collectively rather than independently. This structural pattern provides strong empirical support for conceptualizing social-media-based sports brand development as a multistage process beginning with organizational digital capability and culminating in enhanced brand visibility, strength, equity, market reach, sustainable growth, and competitive positioning.

4. Discussion and Conclusion

The present study developed and empirically validated an integrated model for sports brand development through social media by examining the relationships among Social Media Capabilities, Content Strategy, Fan Engagement, Brand-Building Mechanisms, and Sports Brand Development. The structural model demonstrated strong explanatory and predictive performance, with all hypothesized paths reaching statistical significance. Social Media Capabilities had a strong positive effect on Content Strategy, a significant direct effect on Fan Engagement, and a smaller but significant direct effect on Brand-Building Mechanisms. Content Strategy significantly predicted both Fan Engagement and Brand-Building Mechanisms and also exerted a direct positive effect on Sports Brand

Development. Fan Engagement significantly influenced Brand-Building Mechanisms and Sports Brand Development, while Brand-Building Mechanisms emerged as the strongest direct predictor of Sports Brand Development. The model explained 38.4% of the variance in Content Strategy, 62.4% of the variance in Fan Engagement, 69.2% of the variance in Brand-Building Mechanisms, and 74.1% of the variance in Sports Brand Development. These findings indicate that sports brand development through social media is best understood as an integrated and sequential process rather than as the consequence of isolated digital marketing activities.

One of the most important findings was the strong positive effect of Social Media Capabilities on Content Strategy. This relationship indicates that sports organizations with stronger technological, analytical, interactive, and communication capabilities are better positioned to develop effective content strategies. Social media capabilities provide organizations with access to audience analytics, real-time communication, personalization, trend identification, and multi-platform distribution, all of which contribute to the production of more timely, relevant, and strategically coordinated content. This finding is consistent with research demonstrating that social media marketing can strengthen brand experience when organizations use digital platforms strategically rather than merely maintaining a passive presence [7]. It also aligns with evidence that sports branding in social media environments depends heavily on the strategic combination of platform characteristics, content development, and audience interaction [1]. From this perspective, digital capability represents an organizational resource that enables sports brands to transform technological opportunities into meaningful communication outcomes.

The significance of this path is further supported by research on athlete branding and digital communication. Personal branding increasingly depends on the ability of athletes and sports organizations to employ strategic communication, manage their visual and digital identity, and exploit the commercial potential of online platforms [9, 10]. In contemporary digital environments, content is no longer created independently of technological infrastructure. Instead, data analytics, platform algorithms, social listening, artificial intelligence, and digital production technologies increasingly determine what content is produced, how it is personalized, and when it is delivered. Recent discussions of platform power and generative artificial intelligence in sport further indicate that branding practices are becoming

increasingly dependent on digital infrastructures and algorithmically mediated communication [3, 13]. Therefore, the strong relationship identified between Social Media Capabilities and Content Strategy is theoretically plausible because technological capacity serves as a foundation for more sophisticated and strategically aligned content management.

The study also showed that Social Media Capabilities had a significant positive effect on Fan Engagement. This finding suggests that technological and communication capabilities can directly improve the quality and intensity of interaction between sports brands and their audiences. Features such as real-time responsiveness, personalization, data-driven communication, interactive tools, and integrated platform presence allow sports organizations to respond to fans more effectively and create a stronger sense of accessibility and involvement. The result is compatible with previous research on sports-branded digital applications, which has shown that technology-related qualities and enjoyable digital experiences can influence consumer adoption and engagement [15]. It also corresponds with research on sporting social media communities demonstrating that digital platforms facilitate interaction, community participation, social capital, and shared identity among fans [2]. Thus, social media capabilities appear to contribute not only to communication efficiency but also to relational outcomes by creating an environment in which fans can participate actively in brand-related experiences.

However, Content Strategy had a stronger effect on Fan Engagement than Social Media Capabilities. This result indicates that while technology creates opportunities for engagement, the actual content delivered through those technologies plays a more immediate role in stimulating fan participation. High-quality, relevant, creative, consistent, and emotionally meaningful content is more likely to generate comments, sharing, participation, emotional attachment, and interaction than technologically advanced platforms with weak content. This finding is consistent with evidence that digital sports marketing is especially effective when content reflects audience interests and stimulates interaction [1]. It also aligns with findings indicating that personalized social media experiences can strengthen perceived value and brand attachment, ultimately contributing to greater loyalty among football fans [8]. Therefore, the results suggest that technology should not be viewed as a substitute for content strategy; rather, technology increases the capacity to produce, target, and distribute meaningful content.

The significant effect of Content Strategy on Fan Engagement can also be explained through the emotional and identity-based nature of sports consumption. Sports fans are often highly involved consumers who seek not only information but also entertainment, belonging, emotional stimulation, and identity reinforcement. Storytelling, behind-the-scenes access, live content, athlete-focused narratives, and user-oriented multimedia can deepen the relationship between fans and sports brands. Previous research has demonstrated that athlete brand image can influence fan behavioral outcomes through emotional attachment and perceived value [5]. Similarly, the formation of brand tribes in sports organizations is closely connected to brand personality and the social meanings associated with a sports brand [14]. These findings help explain why content strategy can have such a strong effect on engagement: effective content communicates brand personality, reinforces collective identity, and creates opportunities for fans to become emotionally involved in the brand narrative.

Another important finding was that Social Media Capabilities, Content Strategy, and Fan Engagement all significantly predicted Brand-Building Mechanisms, although Fan Engagement exerted the strongest effect. This result confirms that brand-building outcomes such as awareness, image, credibility, differentiation, perceived value, loyalty, and relationship quality emerge most strongly when audiences are actively involved with the sports brand. The strong role of Fan Engagement is consistent with the relational character of sports branding. When fans interact, share content, participate in digital communities, create user-generated content, and communicate with the brand, they repeatedly encounter and reproduce brand meanings. This process strengthens awareness and associations while also reinforcing emotional and social bonds. Fenton et al. showed that sports-related social media communities can facilitate social capital and place-based identity, demonstrating how interaction among fans contributes to broader brand-related meaning [2]. Likewise, research on brand tribes emphasizes that collective fan communities can produce important behavioral outcomes through shared brand identity [14].

The direct contribution of Content Strategy to Brand-Building Mechanisms further demonstrates that content itself influences how a sports brand is perceived. Consistent visual identity, coherent narratives, relevant information, creative campaigns, and strategically timed communication can enhance brand image and create stronger associations. This interpretation is supported by research on athlete personal branding, where communication strategies play an

important role in developing commercial potential and market positioning [9]. It is also compatible with studies showing that visual rebranding decisions can affect the presentation and perception of athlete brands [10]. Moreover, co-branding and sponsorship research suggests that brand-related meanings are shaped by strategic associations between sports organizations and commercial partners [16]. Together, these findings reinforce the idea that content strategy is not merely a communication activity but a mechanism through which brand identity and value are constructed.

The positive direct effect of Social Media Capabilities on Brand-Building Mechanisms, although weaker than the effects of Content Strategy and Fan Engagement, is also meaningful. Strong digital capabilities can contribute to branding by increasing visibility, facilitating rapid communication, providing consumer insights, and improving consistency across platforms. However, the comparatively smaller coefficient suggests that technological capability alone does not automatically create strong brands. Its influence is largely transformed through the quality of content and the degree of fan engagement. This interpretation is consistent with recent research emphasizing that platform power and digital technologies create both opportunities and strategic dependencies in sport branding [3, 29]. Digital infrastructures may provide scale, reach, and automation, but their branding value depends on how organizations use them to establish authentic and meaningful relationships with audiences.

The results also demonstrated that Content Strategy and Fan Engagement had significant direct effects on Sports Brand Development. These paths indicate that both strategic communication and relational involvement contribute to brand development independently of their effects through Brand-Building Mechanisms. Effective content can directly improve visibility, differentiation, and market reach, while engaged fans can contribute to sustainable brand growth through advocacy, word-of-mouth, community participation, and continued consumption. Research on network marketing in sport similarly emphasizes the importance of community formation and network-based communication for strengthening brands [27]. Sports brands benefit when audiences actively distribute branded messages through their personal networks, because this process increases reach and social credibility beyond what can be achieved through official communications alone.

The relationship between Fan Engagement and Sports Brand Development can also be interpreted in light of

research on consumer loyalty and brand reputation. Sports brands with strong reputations are more likely to attract consumers and influence brand choice [6]. Fan engagement strengthens this process by creating repeated positive interactions, emotional investment, and commitment. Similarly, social media personalization has been associated with stronger brand loyalty through perceived value and attachment [8]. Therefore, fan engagement may directly contribute to brand development because highly engaged audiences are more likely to remain loyal, recommend the brand, purchase associated products, and support the organization over time.

The strongest direct predictor of Sports Brand Development was Brand-Building Mechanisms. This finding represents one of the central contributions of the study. It indicates that sports brand development ultimately depends on the successful establishment of brand awareness, favorable image, meaningful associations, credibility, differentiation, perceived value, loyalty, and high-quality relationships. In other words, social media activities become strategically important when they are translated into these intermediate branding assets. This finding corresponds with research emphasizing the importance of brand image, attachment, and perceived value in shaping fan behavior [5]. It is also supported by evidence indicating that authenticity and brand equity can affect sports-related behavioral intentions [28]. Furthermore, consumer evaluations of branded sports products are influenced by the perceived strength and attractiveness of the brand [19], reinforcing the broader importance of brand-building mechanisms as drivers of market development.

The role of Brand-Building Mechanisms is also consistent with research on sponsorship, co-branding, and commercial partnerships. Sports brands often derive value from associations with athletes, sponsors, leagues, events, and commercial partners. Such relationships can strengthen brand awareness and image when there is perceived compatibility and reciprocal value [16]. Sponsorship activities in the social media era can similarly influence corporate brand image because digital platforms expand the reach and interaction surrounding sponsorship communication [17]. Emerging technologies in sports advertising may further strengthen brand loyalty and purchase intentions when digital experiences reinforce the perceived value of sponsored products [18]. These findings help explain why Brand-Building Mechanisms had the largest direct contribution to the final outcome of the model.

The high proportion of explained variance in Sports Brand Development also suggests that the integrated structure provides a comprehensive account of social-media-based sports branding. The model does not reduce brand development to a single antecedent; instead, it demonstrates a layered process beginning with organizational digital resources and moving through communication strategy, audience engagement, and brand-building outcomes. This integrated perspective is consistent with the broader understanding that sports brands develop through multiple interacting processes, including product branding, athlete branding, internal branding, sponsorship, international positioning, and digital communication [20, 22, 23]. It also reflects the growing importance of culturally and strategically adaptive branding in international markets, where leagues and sports organizations must balance global identity with local relevance [12, 24].

Finally, the findings should be understood in the broader context of the changing sports industry. Sports brand development increasingly occurs within complex digital ecosystems shaped by platform algorithms, generative artificial intelligence, international markets, sponsor networks, athlete brands, and highly active fan communities. Research on AI-enabled branding and platform power suggests that these technological changes will continue to alter how sports brands are created, distributed, and governed [3, 13]. Similarly, the commercial value of athlete brands, international league positioning, and sports-based national branding demonstrates that sports branding now extends well beyond conventional promotional activities [11, 25]. The present model therefore contributes by integrating these increasingly interconnected processes into a coherent framework centered on digital capability, strategic content, engagement, brand-building, and long-term sports brand development.

Several limitations should be considered when interpreting the findings of this study. First, although the mixed-methods design combined meta-synthesis, expert validation, and quantitative modeling, the empirical phase was based on cross-sectional data collected at a single point in time. Therefore, the direction of causality among Social Media Capabilities, Content Strategy, Fan Engagement, Brand-Building Mechanisms, and Sports Brand Development cannot be established with complete certainty. Second, the quantitative data were based on self-reported responses from sports managers, marketing professionals, digital specialists, and administrators, which may be affected by social desirability, common-method bias, or differences

in respondents' interpretations of questionnaire items. Third, the sample included participants from several types of sports organizations, and structural differences among clubs, federations, leagues, and other organizations may have influenced the observed relationships. Fourth, although the final model explained a substantial proportion of variance in Sports Brand Development, other potentially relevant factors such as organizational resources, competitive performance, sponsorship intensity, platform algorithms, market turbulence, fan demographics, and cultural context were not explicitly included in the structural model. Finally, the Fuzzy Delphi phase relied on 18 experts, which was appropriate for achieving specialized consensus but may not fully represent the range of perspectives existing across different sports markets and international contexts.

Future studies should examine the proposed model using longitudinal designs to determine whether changes in social media capabilities and content strategy produce subsequent changes in fan engagement and sports brand outcomes over time. Experimental or quasi-experimental research could also evaluate the effects of specific content formats, personalization strategies, artificial intelligence tools, interactive campaigns, or influencer-based communication on engagement and branding outcomes. Future research should test the model across different sports, countries, leagues, and organizational settings to determine the extent to which the structural relationships remain stable across cultural and market environments. Comparative studies between professional and amateur sports organizations, individual athlete brands and team brands, or domestic and international sports brands may provide additional insights. Researchers could also expand the model by examining moderators such as fan identification, age, platform type, organizational size, competitive success, brand authenticity, or digital maturity. Additional mediating variables such as trust, perceived authenticity, social identification, emotional attachment, and perceived value could further clarify the psychological processes connecting social media activity to brand development. Future studies may also integrate behavioral and platform-generated data, such as engagement rates, sharing patterns, conversion behavior, sentiment analysis, and actual purchase outcomes, in order to complement self-reported measures and improve the ecological validity of the model.

Sports organizations should approach social media as a strategic branding system rather than merely as a promotional channel. Managers should first invest in the technological and analytical capabilities required for social

listening, audience segmentation, real-time communication, data-driven decision-making, personalization, and integrated platform management. These capabilities should then be translated into a coherent content strategy characterized by quality, relevance, creativity, consistency, storytelling, multimedia richness, and appropriate timing. Particular managerial attention should be directed toward fan engagement because the findings indicate that active fan involvement is a central mechanism through which social media activities are transformed into stronger brand outcomes. Sports organizations should therefore create interactive campaigns, encourage user-generated content, respond to fans, support online communities, and provide opportunities for co-creation. At the same time, managers should continuously evaluate whether digital activities are actually strengthening brand awareness, image, credibility, differentiation, perceived value, loyalty, and relationship quality. Performance indicators should therefore move beyond simple measures such as follower counts and impressions and include indicators of engagement quality, brand perception, advocacy, retention, and long-term brand growth. By coordinating social media capabilities, content strategy, fan engagement, and brand-building processes within a unified management framework, sports organizations can improve the sustainability and competitive positioning of their brands in increasingly digital and global sports markets.

Authors' Contributions

Authors equally contributed to this article.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

All procedures performed in this study were under the ethical standards.

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