Advancing Women's Football in Emerging Economies: A Strategic Framework in India for Gender Inclusion, Fan Development, and Long-Term Ecosystem Sustainability

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Abstract:
The international sports market has accepted the potential of women's football for a long time, and its sustainable development in developing countries is constrained by institutional, socio-cultural, participation, and resource constraints. This study outlines and empirically tests a conceptually unified strategy to understand the viability of the Women's Football Ecosystem (WFES) in India. By implementing Stakeholder Theory, Social Identity Theory, Brand Equity Theory, and the Sport Ecosystem Perspective, the framework integrates three strategic domains: Strategic Media Visibility and Brand Positioning (SMVBP); Community Engagement, Fan Ecosystems and Institutional Support (CEP-FE-ISD); and Inclusive Promotional Strategies and Socio-cultural Acceptance (IPSCA). A cross-sectional design was adopted to conduct this empirical study using primary data collection from 480 respondents, including female football players, coaches, football administrators, academics, grassroots facilitators, and community leaders. Structural Equation Modelling (SEM) was employed to evaluate the hypothesized relationships. Findings reveal positive and significant relationships among the three strategic domains and WFES ($p < .001$). SMVBP ($\beta = .451$), CPFIS ($\beta = .389$), and IPSCA ($\beta = .362$). The integrated model explained a sizable proportion of variation in WFES ($R^2 = .784$) and was an important predictor of ecosystem sustainability. The findings highlight how sustainability of women's football can be optimised through structured visibility, community and institutional engagement, and socio-culturally inclusive approaches. This research contributes to sport-management literature by integrating multiple theoretical perspectives with an overarching ecosystem framework in a developing footballing economy. The framework provides relevant evidence for governing bodies, legislators, sporting organisations, educational institutions, community groups, and commercial stakeholders who want soccer to be more inclusive, resilient, and sustainable in the long-term.
Keywords: Women's football; ecosystem sustainability; strategic media visibility; community participation; socio-cultural acceptance; institutional support; emerging economies; India

1. Introduction

Women's football is one of the most rapidly growing sectors of the global sports industry, spurred by greater institutional investment (FIFA, 2023; UEFA, 2024), professional league expansion and international media exposure. The FIFA Women's World Cup and other major international tournaments have greatly increased the appeal of women's football, resulting in unprecedented worldwide audiences, sponsorship spending and policy focus on gender equality in sport (FIFA, 2023).

As a result, the recognition of women's football as an elite sporting environment extends beyond sport for competition's sake to being viewed as a value proposition in social change through gender equality and social inclusion initiatives (Fink, 2016; Bruce, 2016; Giulianotti et al., 2016), with a direct impact on community development and sustainable sport ecosystems.

However, despite this global impetus, significant gaps persist between men's and women's football, especially in developing economies where deep-seated structural, cultural and institutional challenges impede the scope for long-term development. Previous literature has continued to find inequities in media attention, commercial investment and visibility (FIFA, 2023; Cooky & Messner, 2018), professional opportunities (Pfister, 2015), and governance support that restrict the sustainable development of women's football. Lower media coverage and persistent gender stereotypes further reduce female athletes' visibility, leading to lower public perception of the sport overall, even though women's football is regarded as an elite level of competition (Bruce, 2016; Koca & Bulgu, 2005; Cooky et al., 2015). These challenges show that meaningful progress towards sustainability involves coordinated interventions, not just among athletes but also institutions, stakeholders and local communities.

The challenges represented by these issues are of particular interest in the case of India. While the All India Football Federation (AIFF) has sought to expand the sport through grassroots programmes, youth academies, league restructuring, and international participation more broadly (AIFF 2023; FIFA 2023), women's football still suffers from limited audience interest, commercial sponsorship struggles, low media attention and regional disparity. Moreover, the persistent cultural view of sportswoman participation in competitive sport, inadequate investment in grassroots infrastructure, and weak stakeholder alignment still limit sustainable ecosystem evolution (Hargreaves, 1994; Pfister, 2015). These scenarios underscore the need for evidence-based approaches that simultaneously promote gender inclusion, fan development and sustainable governance, as well as institutional cooperation over time.

The existing literature has explored several different dimensions of developments in women's football. Prior research has focused on media representation and female athlete identity (Bruce, 2016), structural inequities in football systems (Cooky & Messner, 2018; Fink, 2016), fan behaviour and sport consumption (Funk & James, 2001; Yoshida et al., 2014), sport branding and brand equity (Aaker, 1991; Bauer et al., 2005). Further studies have stressed the role of inclusive governance, sustainable sport policy and collaborative stakeholder networks for the long-term resilience of organisations in terms of impact on society (Giulianotti et al., 2016; UEFA, 2024). Nonetheless, these bodies of research have largely developed in isolation from each other, and very little empirical work has sought to marry branding, media representation, fan development, cultural communication and gender-inclusive marketing with stakeholder collaboration as part of a single strategic sustainability platform for women's football interests—especially within emerging football nations such as India.

The sustainable development of women's football can be theoretically supported using an integrated ecosystem perspective. According to Stakeholder Theory, stability of organisational performance over time depends on the collaboration among governing bodies, clubs, educational institutions, sponsors, community organisations and media partners (Freeman, 1984; Donaldson & Preston, 1995) as well as athletes and supporters. Likewise, Social Identity Theory states that the more identified fans are with teams and sporting communities, the higher attachment probabilities, levels of participation and long-term behavioural commitment (Tajfel & Turner 1986; Wann & Branscombe 1993). The theory of Brand Equity also illustrates that positive brand perception and representation through effective messaging can reinforce stakeholder perceptions, fan loyalty and profit generation (Aaker, 1991; Keller, 1993). The integration of these complementary theoretical frameworks offers an integrative explanation of how contextual, social, and marketing determinants synergistically undergird the viability of women's football programmes.

In the context of this backdrop, the current study develops and tests an integrated strategic framework to explain how underlying institutional and socio-cultural conditions can sustainably facilitate women's football as a growing sport in emerging economies. Instead of treating developmental challenges as a set of disconnected promotion, organization, or socio-political problems, the study offers an ecosystem rationale in which strategic visibility and positioning, engagement and institutional diversity, inclusive sociocultural strategies and sustainability capacity are dealt with under one analytical umbrella. In this, the study addresses a gap in the scholarly literature comparing women's football development internationally and applies sport ecosystem thinking to an environment characterised by emergent institutional forms, diverse communities and uneven commercialisation. Empirically grounded in the Indian context, the framework offers insights into how synergies among strategic domains individually and jointly explain differences in WFES. This study thus provides a context-sensitive model for developing football economies and new evidence for governance, sport organisations, policy makers, educational institutions, commercial partners and community-based organisations who wish to develop the long-term performance of strong, resilient, viable, inclusive women's football.

2. Literature Review

2.1 Women's Football Ecosystem and Sustainable Development

Women's football has moved from a niche sporting activity to a strategic element of global sport governance, underpinned by significant institutional investment, professionalisation, commercial partnerships and policy initiatives promoting gender equity (FIFA, 2023; UEFA, 2024). While the performance of women's football has grown rapidly, its sustainable sport development seems to rely not merely but even primarily on high-level sporting achievements but also on plugging social inclusion, stakeholder participation, community engagement and institutional thickening (Giulianotti et al., 2016; Misener & Doherty, 2014). As a result, women's football is increasingly seen by governing bodies as a means to contribute to wider social, cultural and economic development goals and help sustain participation at all levels of the football ecosystem.

The sport ecosystem paradigm highlights a multiplicity of interdependent actors (e.g. governing bodies, clubs, educational institutions, sponsors, media organisations local communities, athletes' supporters and policymakers) where coordinated interactions between these actors collectively drive the long-term viability of sport (Adner, 2017; Freeman, 1984). Instead, they complement each other's resources which provide the necessary conditions for athlete development, fan engagement, commercial growth, and institutional legitimacy. Prior research on collaborative governance and stakeholder integration highlights their effectiveness in enhancing organisational resilience, innovation potential, and sustainable sport development (Donaldson & Preston, 1995; Misener & Doherty, 2014).

Ecosystem development remains uneven too in these emerging economies within women's football. Investments in women's competitions and grassroots programmes by international organisations have grown but structural barriers still hinder sustainable growth. Studies repeatedly highlight under-developed infrastructure, minimal financial backing, unequal media coverage, weak commercial support and little governance assistance as key barriers to progress in women's football development (Cooky & Messner, 2018; Bruce, 2016; FIFA, 2023). Moreover, systematic gender stereotypes and institutional disadvantages still determine possibilities of participation, professional advancement, and public acceptance of female athletes (Pfister 2015; Fink 2016). These challenges show that sustainability is a broad set of interventions that need to be coordinated—not just within competitive performance, but with marketing, cultural inclusion, policy support and collaboration among stakeholders.

India provides a serious case study to explore ecosystem sustainability given that women's football is still nascent even as intentional institutional/organizational strategies have gained traction. Introduced by the All India Football Federation are youth development programmes, leagues and international participation; however, significant challenges persist in terms of fan engagement, commercial viability, grassroots infrastructure, national-level disparity and stakeholder collaboration (AIFF 2023; FIFA 2023).

Thus, effective measures to develop a sustainable ecosystem will need more integrated strategies that can bolster the visibility of athletes and grow fan engagement with institutional partnerships for increased public backing towards women's football over the long term.

While previous research has investigated the development of women's football in standalone silos such as gender equity, media representation, the experiences of female athletes, sponsorship and participation (in isolation), few empirical studies have examined how branding, fan development, stakeholder collaboration, cultural communication and gender inclusive marketing intersect to support fairer ecosystem sustainability within a single strategic framework. The incongruity between these different levels of football theory is exemplified by new footballing nations such as India, where evidence-based models that can inform long-term policy and strategic planning are few and distant. Consequently, the current research fills this void by proposing a holistic ecosystem framework that illuminates the co-action of several strategic drivers on sustainable women's football development.

2.2 Branding and Media Representation in Women's Football

Branding and media representation have emerged as essential strategic factors in increasing the profile, legitimacy, and sustainability of women's football. This is a key to not only identifying teams or competitions, but also to increasing stakeholder confidence and investment in sponsorship as well as creating long-term loyalty among fans (Keller, 1993; Bauer et al., 2005). Branding in women's football can also be accomplished by leveraging channels to share athlete identity, competitive excellence, and social values to attract larger audiences (Funk & James, 2001; Yoshida et al., 2014). Thus, strategic branding has developed into a critical tool to widen the reach and strengthen the long-term viability of women's football.

Media matters as much as when it comes to creating public impressions and fuelling the commercial development of women's football. While digital platforms and social media have significantly amplified the spotlight on female athletes, studies still indicate that there are significant inequalities in broadcast coverage, news representation and sponsorship reach compared with men's football (Bruce 2016; Cooky et al. 2021). Positive, balanced media representation supports athlete awareness, brand equity and growth of viewership whilst limited coverage reinforces gender stereotypes and limits commercial growth (Fink, 2016; Bell et al., 2024).

These outcomes are supported by more recent research suggesting that time spent engaging with authentic storytelling, athlete-centred communication and digital interaction with fans enhances an emotional attachment to sport brands (Abeza et al., 2017; Parganas et al., 2017). In the case of emerging football nations like India, strategic branding along with inclusive media communication can help build public awareness, instil stakeholder confidence, and break open the traditionally spectator sections, playing an active role in women's football. Building a strong and culturally appropriate brand image challenges several strategic avenues toward sustainable ecosystem development.

Although sport branding and media communication have attracted academic attention, limited empirical research examines the interaction between commercial strategies within ecosystems in women's football, particularly in emerging economies. Previous research on sporting brands, media exposure, or fandom has largely been disconnected from each other, much less integrated into perspectives on how branding and media representation relate to wider ecosystem sustainability. Such a gap offers fertile ground for examining branding and media representation as strategic factors in the sustainable development of women's football.

2.3 Community-Based Audience Expansion and Participatory Football Networks

The sustainable development of women's football is reliant on its ability to develop wider and more participatory networks of fans that extend beyond traditional spectatorship.

By doing so, community engagement and online and locally rooted football efforts can expand the reach of the sport socially alongside reinforcing its place among institutions. Digital platforms, supporter communities and athlete-created content also allow sport organisations to reach geographically separated audiences and extend engagement beyond game-day interactions (Abeza et al., 2017; Parganas et al., 2017).

Community-based mechanisms also play a role in building resilient football networks. Schools, universities and local sporting initiatives represent established points of entry into sport participation, with the potential linking role to larger social and educational contexts being available (Misener & Doherty, 2014; Giulianotti et al., 2016). This is, of course, most relevant in developing sport economies which tend to be less commercially or institutionally developed.

While research around sport audiences and digital consumption has been expanding, the way in which community participation, audience-network expansion and institutional connectivity work together as part of new women's football ecosystems remains relatively little examined. This study thus places these mechanisms under the umbrella of Community Participation, Fan Ecosystems and Institutional Support (CPFIS) instead of simply seeing audience development as a distinct behavioural outcome.

2.4 Culturally Responsive Communication and Regional Accessibility

As sport organisations operate increasingly within pluralistic social and linguistic environments, culturally responsive communication becomes more important. Communication strategies that are sensitive to varying regional contexts have the potential to make messages more relevant, deepen contextual salience, and extend sporting narratives into a wide range of communities. Significant in the Indian context, with linguistic and cultural diversity requiring communication strategies to reach wider audiences beyond city and countrywide channels (Kotler et al., 2022; Keller, 2013)

Digital media creates new possibilities for contextualized communication through localization of narratives, athlete stories, and community content. These approaches can improve accessibility of communication and consolidate the importance of sporting bodies in diverse social contexts. Communication reflecting relevant cultural meanings and understood social contexts may also deepen identification and sense of belonging with sport communities (Tajfel & Turner, 1986; Heere & James, 2007).

In the context of women's football, culturally responsive communication is then not only a marketing tool, but also an ecosystem for accessibility and social embedding. Its position in holistic frameworks for women's sport development is, however, relatively under-studied in emerging market ecologies. It therefore frames cultural responsiveness and communicational accessibility as components of the overarching strategic infrastructure that underpins a more inclusive and sustainable model for women's football.

2.5 Gender-Inclusive Marketing and Public Perception

Gender-inclusive marketing has developed as a type of strategic communication that promotes equality, diversity and social inclusion through challenging traditional gender stereotypes in sport communication. Gender inclusive marketing stresses the importance of equal visibility and the authentic representation of women athletes through equal opportunity for promotion, unlike most mainstream concepts that perpetuate male sport representations (Fink, 2016; Cooky & Messner, 2018). We think inclusive marketing campaigns are essential for the commercial aspect of women's football, as well as helping to change social attitudes towards women in competitive sport.

The perception of the public is crucial to the future viability and acceptability of women's football.

Positive public perceptions translated into increased interest in spectatorship, sponsorships, media coverage and community participatory sports events while negative stereotypes have continued to hinder the visibility of female athletes as well as pathways for professional development (Bruce, 2016; Pfister, 2015). Evidence suggests that repeated exposure to inclusive marketing initiatives enhances awareness, improves perceptions of sporting ability and promotes wider acceptance of women's football among different demographic sectors (Bell et al., 2024; Fink, 2016).

Modern advancements in digital marketing have also improved opportunities for promoting gender-inclusive narratives through social media, athlete storytelling and community-focused campaigns. Interactive communication allows football organisations to emphasise athletic performance, leadership skills and social impact, thus enhancing the emotional bond with existing and prospective supporters (Abeza et al., 2017; Clarkson et.al., 2024). These tactics are especially useful in fledgling football markets, where virtual social media offers affordable ways to raise mass awareness and tackle the gender bias.

Despite the isolated strands of prior research on gender equality in sport and media representation, empirical work examining how gender-inclusive marketing affects public perceptions alongside women's football ecosystems has been surprisingly absent. Data is still scarce, particularly in developing economies where socio-cultural factors determine the perception of female athletes. Accordingly, the study examines gender-inclusive marketing as a strategic driver of positive public perception and sustainable women's football mobility in India.

2.6 Stakeholder Collaboration and Grassroots Football Development

Since long-term sport development relies on a skilful cooperating network between governing authorities, school and amateur club systems, sponsors, media organisations, communities and public authorities (Freeman, 1984; Donaldson & Preston, 1995), stakeholder engagement is the core guiding principle of sustainable governance in sport. Instead of working in isolation, these stakeholders work collaboratively to provide the funding, infrastructure, policy support, technical expertise and community engagement required to develop sustainable sporting ecosystems (Misener & Doherty, 2014; Shilbury & Ferkins, 2015). Collaborative governance is especially salient in women's football, as the sport has root-level institutionalised challenges that need to be addressed commensurately to avail more spaces for participation.

Grassroots football development refers to the core of long-term ecosystem sustainability through structured pathways for athlete participation, talent identification, community engagement and lifelong sport involvement (FIFA 2023; UEFA 2024). Prior literature has shown that school football programmes, community clubs, local associations and youth development significantly improve participation levels while enhancing social inclusion and sport ownership within communities (Coalter, 2007; Giulianotti et al., 2016). This is especially true for women's football, where the most effective grass-roots initiatives are led by active encouragement and environments provided in the family, education system with teachers, coaches or community leaders from within local organisations (Pfister 2015; Bruce 2016).

Further studies have also indicated that collaboration between stakeholders strengthen the effectiveness of grassroots programming with respect to resource mobilisation, knowledge sharing, strategic planning and policy implementation (Parent & Harvey, 2009; Ferkins & Shilbury, 2015). Moreover, the use of digital communication platforms has facilitated collaboration, thus enabling governing bodies, clubs, commercial sponsors and partners (e.g. commerce companies), educational institutes and community organisations to better coordinate their promotional campaigns, volunteer networks and participation initiatives (Abeza et al., 2017). Integrated partnerships such as these are increasingly viewed as being foundational to growing participation, creating new fandoms and enhancing institutional sustainability of nascent sport systems.

While collaborative governance is gaining recognition in sport management literature, stakeholder collaboration as a strategic antecedent of grassroots women's football development continues to lack empirical examination, especially within emerging economies like India. Previous studies have focused on either governance, community sport or stakeholder management in isolation, with a lesser focus on the interplay between these dimensions and their role in women's football sustainability. Consequently, the current study explores stakeholder collaboration as a principal driver for grassroots football advancement alongside sustainable sport system longevity.

2.7 Theoretical Foundation

The current study is based on an integrative theoretical framework that applies Stakeholder Theory, Social Identity Theory, Brand Equity Theory and the Sport Ecosystem Perspective to understand the key antecedents of effective sustainable women's football development. The combined theory provides an in-depth framework for understanding how institutional collaboration, branding of women's football, fan engagement, strategic cultural connection and inclusive marketing enhance existing frameworks for engaging with the ecosystem of women's football in emerging economies.

Stakeholder Theory (Freeman, 1984) identifies that sustainable organisational development requires concerted effort among many stakeholders over isolated institutional action. Within the women's game, a multitude of stakeholders, including governing bodies, clubs, schools/universities, sponsor companies/groups, media organisations and community leaders, play their role together with parents and fans to drive participation (Donaldson & Preston 1995), resource mobilisation (Ferkins & Shilbury 2015), and grassroots competition development. Therefore, this theory establishes a conceptual perspective for investigating the collaboration of stakeholders as a measure to promote grassroots football development.

The Social Identity Theory (Tajfel & Turner, 1986) describes how identification with a social group creates a stronger emotional attachment and commitment. In the context of sport, fan identification is increased by shared values, cultural belonging and sense of community participation to further increase long-term engagement and supporter loyalty (Heere & James, 2007; Wann & Branscombe, 1993). This understanding backs the relationships between alternative fan development, local-linguistic communication, cultural connection and fan engagement found within women's football.

Brand Equity Theory suggests that positive awareness, associations and consistency lead to stakeholder perceptions of greater value (Aaker, 1991; Keller, 1993). Strategic branding and media representation within women's football, gender-inclusive marketing enhances visibility of athletes, the public's perception and attraction of sponsors while improving commercial sustainability (Bauer et al., 2005; Fink, 2016). Therefore, this theory provides an explanation regarding the enhancement of legitimacy with long-term sustainability of women's football through marketing related strategies.

Based on this classification, the Sport Ecosystem Perspective synthesises these theories while orienting sport development as a collaborative process, with multiple interactions occurring among institutional, commercial and community stakeholders (Adner, 2017; Misener & Doherty, 2014). The ecosystem perspective accepts branding, fan engagement and stakeholder collaboration, gender inclusion not as separate aspects but as intertwined strategic drivers of sustainable sport development (Giulianotti et al., 2016). Thus, the current research develops a comprehensive model where branding and media exposure, non-traditional fan engagement practices, local-language content creation, female-targeted marketing and collaborative governance serve as important mechanisms to ensure long-term sustainability for women's football in India.

2.8 Research Gap

Prior research on women's football has developed largely in disconnected strands: media discourse and online hostility toward female athletes (Bruce, 2016; Fenton et al., 2023), gender inequality and structural exclusion (Cooky & Messner, 2018; Pfister, 2015), sport branding (Bauer et al., 2005), fan

engagement (Funk & James, 2001; Yoshida et al., 2014), and stakeholder-driven governance of sustainability initiatives (Misener & Doherty, 2014; Ferkins & Shilbury, 2015; Daddi et al., 2024). Three specific limitations remain. First, existing ecosystem-sustainability studies, including recent European evidence on stakeholder-driven green strategies in grassroots football (Daddi et al., 2024), are built almost entirely on data from mature football markets with established commercial infrastructure and institutionalised stakeholder networks; whether the same stakeholder logic explains sustainability where these structures are still forming remains untested. Second, studies of marginalised women spectators (Taylor & Leslie-Walker, 2024) and of gender-based hostility directed at women's football online (Fenton et al., 2023) suggest that socio-cultural acceptance functions as a distinct, context-dependent barrier rather than a generic marketing outcome, a distinction the branding and fan-engagement literatures have not tested empirically outside Europe. Third, comparative evidence on integrating women's and men's football structures across Brazil, China and Italy (Valenti et al., 2021) shows that institutional pathways to sustainability diverge sharply by national context, yet no comparable integrated, theory-driven empirical model exists for South Asia. Because emerging football economies such as India combine nascent commercial infrastructure, high linguistic and cultural diversity, and stakeholder networks that are still being formed rather than institutionalised, mechanisms identified in Global-North studies cannot be assumed to generalise. The current research addresses this gap by empirically testing an integrated strategic framework, combining branding, non-traditional fan development, local-language communication, gender-inclusive marketing and stakeholder collaboration, in a Global-South, ecosystem-formation context, thereby extending sport ecosystem and stakeholder theory beyond the mature-market conditions under which it was largely developed.

2.9 Theoretical Contribution

This study's theoretical contribution is threefold. First, existing sport ecosystem models (Adner, 2017; Misener & Doherty, 2014) describe interdependence among stakeholders but were developed largely from professionalised, resource-rich contexts; they do not specify how ecosystem actors coordinate when formal institutional infrastructure, such as leagues, sponsorship markets and media-rights structures, is still emerging. This study addresses that gap by testing an integrated model in India, extending the sport ecosystem perspective from ecosystem-maintenance conditions to ecosystem-formation conditions.

Second, the study integrates Stakeholder Theory (Freeman, 1984), Social Identity Theory (Tajfel & Turner, 1986), Brand Equity Theory (Aaker, 1991; Keller, 1993) and the Sport Ecosystem Perspective (Adner, 2017) into a single testable structural model rather than applying them as parallel lenses, as is common in prior single-theory studies of women's football (e.g., Bruce, 2016, on media and identity; Bauer et al., 2005, on brand equity). What existing single-theory studies cannot explain is how these mechanisms combine: the integrated model demonstrates empirically that branding and media visibility, community-institutional participation, and inclusive promotion operate as complementary rather than competing drivers of sustainability (inter-construct r = 0.652-0.716).

Third, the Indian setting functions here as a theory-generating case rather than an additional data point. Because India's women's football ecosystem is simultaneously linguistically fragmented, culturally heterogeneous and institutionally young, it represents a distinct case of ecosystem formation under conditions of high socio-cultural friction, conditions largely absent from the Global-North contexts that dominate the existing literature (Fenton et al., 2023; Taylor & Leslie-Walker, 2024; Hadwiger et al., 2024). Testing the model in this setting therefore generates theory about how ecosystem-sustainability mechanisms behave under institutional scarcity and cultural plurality, a boundary condition existing sport ecosystem theory has not yet specified, rather than simply reproducing previously known relationships in a new country.

2.10 Objectives of the Study:

- To examine the strategic role of media visibility, communication practices, and brand positioning in strengthening the sustainability of women's football in India.
- To examine the role of grassroots community involvement, emerging fanbases and organisational buy-in in increasing & sustaining domestic female football.

- To assess the joint impact of inclusive promotion strategies and socio-cultural acceptance on sustainable growth plans for women's football.
- To develop and test an Integrated Women's Football Ecosystem Sustainability Framework for emerging economies, based on the relationships among strategic communication, stakeholder engagement, grassroots development and long-term sustainability.

2.11 Conceptual Framework and Hypothesis Development

Drawing on the theoretical foundations and research gaps established in earlier sections, this research proposes a unified framework for understanding the strategic conditions underpinning the sustainability of women's football in an emerging-market context. These conditions are then structured within a model that delineates three interrelated strategic domains: Strategic Media Visibility and Brand Positioning (SMVBP), Community Participation, Fan Ecosystems and Institutional Support (CPFIS), and Inclusive Promotional Strategies/Socio-cultural Acceptance (IPSCA), with the overall outcome domain representing Women's Football Ecosystem Sustainability (WFES). The framework offers a theory-driven structure to empirically test the hypothesized associations among these domains within the Indian women's football ecosystem instead of assuming fixed causal impacts.

The following hypotheses were formulated based on the theoretical foundation and the proposed conceptual framework:

- H1: Strategic media visibility and brand positioning positively influence the sustainable development of women's football.
- H2: Community participation, emerging fan ecosystems, and institutional support positively influence grassroots women's football development.
- H3: Inclusive promotional strategies and socio-cultural acceptance positively influence the long-term growth of women's football.
- H4: Strategic communication, stakeholder engagement, grassroots development, and socio-cultural acceptance collectively contribute to Women's Football Ecosystem Sustainability.

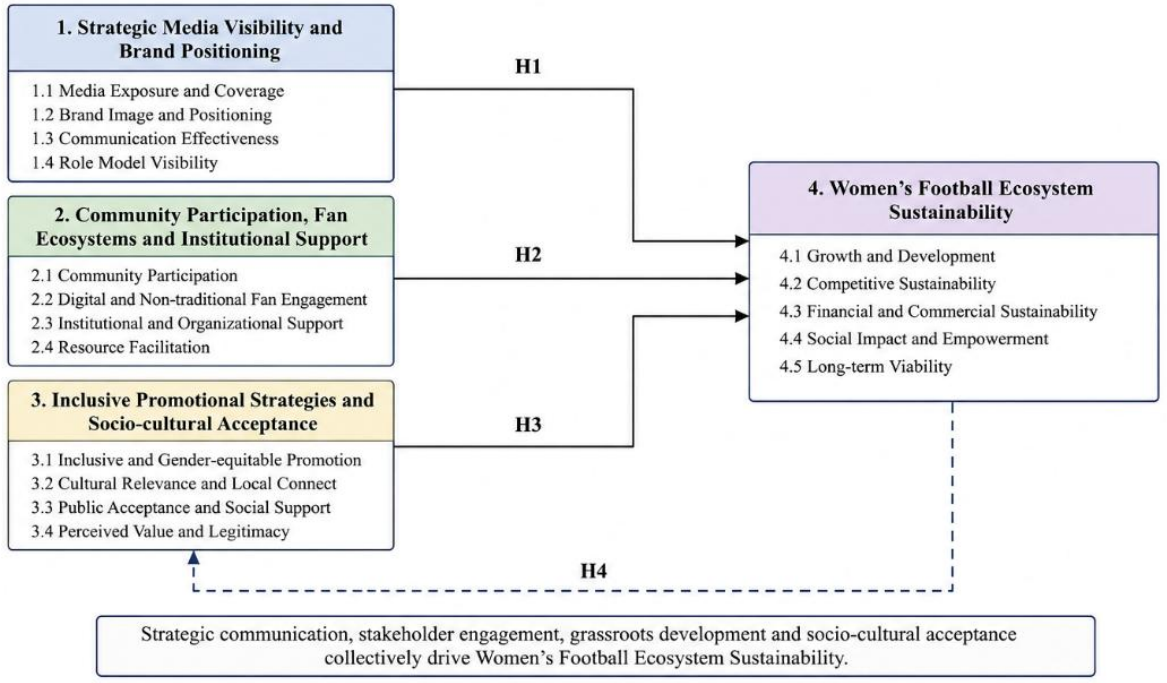
Theoretical Justification of Hypotheses

H1 draws on Brand Equity Theory (Aaker, 1991; Keller, 1993), which holds that consistent, positive brand associations increase perceived value, stakeholder trust and willingness to invest. Strategic media visibility performs this function by supplying the athlete narratives, competitive achievements and social-value messaging that Keller (1993) identifies as the building blocks of brand knowledge; where media exposure is limited or stereotyped, as documented in emerging football markets (Bruce, 2016; Fink, 2016), brand equity accumulates slowly and sponsorship confidence remains weak. The hypothesis is reinforced by evidence that authentic, athlete-centred digital communication strengthens emotional attachment to sport brands (Abeza et al., 2017; Parganas et al., 2017) and that recent European evidence links integrated team visibility directly to larger, more committed audiences (Hadwiger et al., 2024). Because India's women's football ecosystem is still building public recognition, strategic media visibility is expected to operate as a foundational driver of sustainability, consistent with brand equity theory's emphasis on awareness as a precondition for downstream value.

H2 is grounded in Stakeholder Theory (Freeman, 1984; Donaldson & Preston, 1995), which holds that organisational sustainability depends on the coordinated contribution of multiple, interdependent actors rather than on any single actor's performance. Community participation, emerging fan ecosystems and institutional support represent the operational expression of this coordination: they supply the volunteer labour, facility access, coaching capacity and legitimacy that governing bodies alone cannot provide in a resource-constrained market (Misener & Doherty, 2014; Shilbury & Ferkins, 2015). This is further supported by evidence that stakeholder-driven pressure is a primary mechanism through which sustainability practices diffuse in grassroots football even in institutionally mature European settings (Daddi et al., 2024), suggesting the mechanism should be at least as important where formal institutional channels are still developing. Because grassroots infrastructure in Indian women's football remains uneven across states (AIFF, 2023), stakeholder collaboration is expected to be the strongest of the three predictors, compensating for institutional gaps that exist to a lesser degree in more developed systems.

H3 draws jointly on Social Identity Theory (Tajfel & Turner, 1986) and evidence on socio-cultural acceptance as a distinct barrier to women's sport participation. Inclusive promotional strategies widen the social identities with which potential fans, players and community members can identify, increasing the psychological attachment that Social Identity Theory links to participation and loyalty (Wann & Branscombe, 1993; Heere & James, 2007). Socio-cultural acceptance operates alongside this as a boundary condition: research on online misogyny directed at women's football (Fenton et al., 2023) and on the marginalisation of minority women spectators (Taylor & Leslie-Walker, 2024) indicates that hostile or exclusionary social environments can suppress engagement regardless of how well a sport is marketed. Because socio-cultural norms around women's participation in competitive sport remain a documented constraint in India (Hargreaves, 1994; Pfister, 2015), inclusive promotion is hypothesised to influence sustainability both directly, by building positive attitudes, and as a precondition for the effectiveness of the media and stakeholder mechanisms captured in H1 and H2.

H4 reflects the Sport Ecosystem Perspective (Adner, 2017; Giulianotti et al., 2016), which treats sustainability as an emergent property of interacting strategic mechanisms rather than the sum of independent effects. Media visibility raises awareness that stakeholder collaboration converts into participation, while socio-cultural acceptance determines whether that participation is sustained. This logic is consistent with comparative evidence that institutional integration pathways for women's football diverge by context (Valenti et al., 2021) and therefore need to be modelled jointly to capture ecosystem-level sustainability. Support for H4 would indicate that the three strategic dimensions function as an integrated system in the Indian context, consistent with, and extending, the sport ecosystem perspective's core claim that sustainable sport development is a property of the whole network of actors rather than of any single lever in isolation.



Notes: H1, H2, H3 represent the direct positive effects of the respective strategic dimensions on ecosystem sustainability.
H4 represents the integrated and collective contribution of all dimensions toward building a sustainable women's football ecosystem.

Figure I: Conceptual Framework for the Study

3. Research Methodology

3.1 Research Design

The current research utilised a quantitative, cross-sectional approach to investigate the strategic drivers that guide the sustainable development of women's football in India.

Given the nature of this research, a quantitative strategy was deemed suitable as it allows for the testing of hypothesised relationships across different latent constructs through structured statistical processes (Creswell & Creswell, 2023; Hair et al., 2022). In this study, we administered a structured questionnaire to ELITE and NON-ELITE stakeholders of women's football, including players, coaches, football administrators, physical education professionals, supporters and community representatives to gather primary data.

This conceptual framework, drawn from existing literature on sport management, stakeholder theory, sport branding and sustainability in ecosystems, has been tested using Structural Equation Modelling (SEM). SEM is chosen here because it assesses latent construct measurement properties and then tests structural relationships sequentially on multiple variables (Hair et al., 2022; Kline, 2023), hence supporting a comprehensive analytical framework for theory validation. The hypothetical structure was to explain the sustainable development of women's football ecosystem, incorporating respective outcome constructs influenced by branding and media representation, non-traditional fan development, local-language communication, gender-inclusive marketing and stakeholder collaboration.

3.2 Sampling Design and Participants

We adopted a multi-stage purposive sampling design in order to garner responses from the key stakeholders active in India's women's football ecosystem. Because the proposed conceptual framework explores branding, fan development, cultural communication, gender-inclusive marketing strategies and approaches, stakeholder engagement, and grassroots development (Yasuda & Saeki 2023), responses were elicited from stakeholder groups who have direct involvement in the planning, promotion, participation and governance of women's football. These comprised women Football players, Coaches, Football Administrators, Physical Education professionals and Academicians, Grassroots coordinators, supporters, and a representative from the community sports organisations. The study gained from being able to learn more about the ecosystem, after engaging multiple stakeholder groups, limiting the constraints of single-respondent research designs (Freeman, 1984; Misener & Doherty, 2014).

The study covered only sample states of India where there was already some level of women's football activities and organised competitions in place. Respondents were recruited via registered football clubs, sports academies, educational institutions, district and state football associations. Participants all had to be experienced, professional, or engaged in some way in women's football for the information gathered to be reliable and relevant. Individuals with no involvement in women's football were excluded from the sampling frame.

The required minimum sample size was calculated according to the SEM recommendations, which stipulate that an appropriately large sample is needed for any complex models with multiple latent constructs for stable parameter estimation and sufficient statistical power (Hair et al., 2022; Kline, 2023). It was deemed appropriate for the sample to comprise a final sample of 480 respondents in order to achieve SEM estimation prerequisites while maintaining satisfactory representation across stakeholder categories. Such a sample size exceeds the minimum suggested for covariance-based SEM and increases the robustness, generalisability, and predictive power of the proposed model (Hair et al., 2022).

Table I presents the proposed stakeholder categories included in the empirical investigation.

Women's Football Players	State, university, academy and club players
Coaches	Certified football coaches and trainers
Football Administrators	Officials from football associations and clubs
Physical Education Professionals	Faculty members and sports educators
Sports Academicians	Researchers and university sports experts
Grassroots Coordinators	School, academy and community football coordinators
Supporters	Active followers and spectators of women's football
Community Organisations	NGOs and organisations promoting women's sport

Source: Developed by the authors based on the literature review and stakeholder framework.

3.3 Instrument Development and Measurement

Drawing on a systematic review of existing literature in sport management, sport marketing, stakeholder theory, community sport development and women's football to justify the constructs contained within the conceptual framework, a structured questionnaire was developed. The measurement instrument was developed to conceptually align with the construct definitions of the updated research framework while promoting comparability against extant validated measurement scales found in sport management and marketing literature (DeVellis & Thorpe, 2021; Hair et al., 2022). Some measurement items were adapted and borrowed from earlier studies, depending on their appropriateness to the socio-cultural and institutional context of women's football in India.

The questionnaire had two sections. The first subsection provided demographic and professional factors (gender, age, stakeholder group [players, coaches, administrators, referees and football development personnel], highest level of education qualification reached, e.g. high school graduate, bachelor's degree or higher, year of involvement with football and organisation as well). In the subsequent section, we conducted an evaluation of the study constructs: Strategic Media Visibility and Brand Positioning (SMVBP); Community Participation, Fan Ecosystems and Institutional Support (CPFIS); Inclusive Promotional Strategies and Socio-cultural Acceptance (IPSCA); and Women's Football Ecosystem Sustainability (WFES). For each of these constructs, a set of measurement items was developed based on established scales identified from previous research, including the authors' prior work in this context. The items were scaled both in terms of yes-or-no responses and along a five-point Likert-type scale from 1 = Strongly Disagree to 5 = Strongly Agree, which is an appropriate scaling technique for Sport management research evaluating perceptions & attitudes and behavioural intentions more broadly (Hair et al., 2022; Kline, 2023).

Assessing Content Validity of the Draft Questionnaire through Expert Reviews in Related Fields. For draft questionnaire content validity, expert reviews were conducted in three related fields: sport administration, sport marketing, and academic research methodology. The experts then rated each measurement item for relevance, clarity, and to what extent each measurement item represented the proposed constructs. Their recommendations included some word changes, clarification of concepts, adjustment to context and readability. A pilot study using data from purposively selected respondents representing the target population was conducted to evaluate the reliability, understandability, and feasibility of using this instrument prior to administration in a full-scale survey.

The psychometric properties of the measurement model were first evaluated before testing the structural relationships. The internal consistency reliability is measured by Cronbach's Alpha and composite reliability (CR). Discriminant validity was assessed through the Heterotrait-Monotrait (HTMT) ratio, which tests that every latent construct theoretically represents a different concept (Fornell & Larcker, 1981; Hair et al., 2022; Henseler et al., 2015). Following confirmation of the recommended thresholds for reliability and validity, Structural Equation Modelling (SEM) was used to estimate the structural model to test the posited relationships among study constructs.

Table II. Measurement Constructs and Sources

Strategic Media Visibility and Brand Positioning (SMVBP)	Media Visibility, Brand Positioning, Communication Effectiveness, Athlete Representation	Independent Variable	Arai et al. (2013); Fink (2016); Pegoraro et al. (2015); Parganas et al. (2015)
Community Participation, Fan Ecosystems and Institutional	Community Participation, Emerging Fan Ecosystems, Institutional Support, Grassroots Engagement	Independent Variable	Funk et al. (2009); Yoshida et al. (2014); Parent & Harvey (2009);

Support (CPFIS)			Misener & Doherty (2014)
Inclusive Promotional Strategies and Socio-cultural Acceptance (IPSCA)	Inclusive Promotion, Gender Equity, Cultural Acceptance, Public Support	Independent Variable	Cunningham (2019); Fink (2016); Hoeber & Kerwin (2013); Knoppers & Anthonissen (2008)
Women's Football Ecosystem Sustainability (WFES)	Grassroots Development, Participation Growth, Institutional Sustainability, Commercial Sustainability, Social Empowerment, Long-term Development	Dependent Variable	FIFA (2018); UEFA (2019); Misener & Doherty (2014); United Nations (2015)

Source: *Developed by the authors based on Aaker (1991), Freeman (1984), Funk and James (2001), Brewer et al. (1993), Keller (1993), Bruce (2016), Fink (2016), Misener and Doherty (2014), and FIFA (2023).*

The measurement framework was pre-defined based upon theoretical basis and existing literature for constructs used in the study. Therefore, CFA was used as the main measurement-model validation and not EFA to extract an alternative factor structure from the same data. This reason was deemed appropriate as the focus of the analyses was on how well a theoretically specified measurement structure fits the data rather than to uncover any latent structure in an unknown population. Reliability, convergent validity and discriminant validity were then tested before estimating the structural model. However, cross-validation utilizing an independent holdout sample is a positive advance that can be used in future research on scale development.

3.4 Data Collection Procedure

To collect primary data, a structured questionnaire was developed and administered to various stakeholders within the women's football ecosystem in India. The survey was administered both in print and online to maximise participation of respondents as well as ensure that various stakeholder groups are sufficiently represented. The survey was administered via football clubs, state football associations, academy programs, educational institutions and community organisations engaged in the promotion of credits and development of women's football. Respondents were given an explanation of the study before participating in the form of a declaration that stated which established their responses will only be used for academic research purposes.

Participation in the survey was completely voluntary, and data were collected only after informed consent was obtained. No identifiable information was gathered, and anonymity and confidentiality of participants remained assured in all aspects throughout the research. The research was conducted in compliance with established ethical principles for social science research which included the option of refusing to take or withdrawal from completing the survey at any stage without penalty (Creswell & Creswell, 2023). After data collection, received questionnaires were screened for completeness, consistency of responses and missing values before they were used for statistical analyses. Responses with excessive missing data in any single scale or a severe indication of response bias were filtered out from subsequent analyses. The final dataset was coded for SEM, followed by the data preparation steps to meet the assumptions required to assess the measurement model and then the structural model (Hair et al., 2022; Kline, 2023).

3.5 Data Analysis Strategy

The two-stage structural equation modelling (SEM) procedure using IBM SPSS Statistics 29 and AMOS 29 to analyse the collected data was employed. First, descriptive statistics were obtained to describe the

demographic characteristics of respondents. Then internal consistency, convergent validity and discriminant validity were established through measurement model assessment using Cronbach's alpha, Composite Reliability (CR), Average Variance Extracted (AVE), standardised factor loadings and the Heterotrait–Monotrait (HTMT) ratio, respectively, to evaluate construct reliability (Hair et al., 2022; Henseler et al., 2015).

Since the common method variance (CMV) could be a concern because of its self-referenced nature, before running and estimating both, the measurement model and the structural model. The wording for items was designed to be concise and unambiguous, respondents were assured of anonymity and confidentiality, and predictor- and outcome constructs appeared as conceptually distinct sections of the questionnaire. Harman single-factor test was conducted using rotated exploratory factor analysis to explore whether the total variance is explained primarily by a single dominant latent factor (s). The first unrotated factor accounted for well below 50% of the total variance, which rendered common method bias unlikely.

Later, we checked the measurement model using Confirmatory Factor Analysis (CFA). The model fit was evaluated using several goodness-of-fit indices: Chi-square, relative to the degrees of freedom (χ^2/df) 0.90; Tucker–Lewis Index (TLI) > 0.90; Goodness-of-Fit Index (GFI) > 0.95; Standardised Root Mean Square Residual (SRMR < 0.08); and root mean square error of approximation (RMSEA < 0.06). The suggested threshold values given by Hair et al. A cutoff for acceptable model fit was adopted based on Hu and Bentler (1999) as well as Kline (2023).

Subsequently, the structural model was evaluated to test the hypothesised relationships among the latent constructs after satisfactory measurement properties had been established. The standardised path coefficients (β), critical ratios (CR) and probability values ($p < 0.05$) were used to assess the significance of structural paths. The explanatory power of the model was estimated using R^2, and then the overall results were interpreted to evaluate the conceptual framework proposed for developing women's football sustainably in India.

3.6 Ethical Considerations

A study conducted in accordance with the ethical principles for social science research was prepared to guarantee protection of subjects' rights, privacy and confidentiality. All participants were informed of the aims and objectives of the study before data collection, and participation in this study was entirely voluntary. The patients completed a questionnaire only after giving their informed consent and were granted anonymity regarding the answers provided since the information was collected solely for academic research purposes. No personally identifiable information was recorded, and they were free to withdraw from the study at any time without repercussions. The study protocol was approved by the ethical committee of their affiliated institution and performed in accordance with the principles outlined in the Declaration of Helsinki for research involving human participants (World Medical Association, 2013).

This study was a non-intervention questionnaire-based study of adults and thus did not involve the performance of clinical investigations, manipulations or collection of sensitive biological information. The study was conducted with voluntary participation and notified consent which ensured confidentiality and anonymity. In compliance with the institutional statutory/regulatory requirement for this category of research, formal ethics approval by an appropriate body was.

3.7 Common Method Bias

Because both predictor and outcome variables were collected from the same respondents using a single self-report questionnaire, the data are potentially subject to common method bias (CMB). Procedural safeguards were applied during instrument design, including psychological separation of predictor and outcome items, guaranteed respondent anonymity, and item wording confirmed through expert review (Podsakoff et al., 2003).

Harman's single-factor test and a full collinearity VIF test (Kock, 2015) should be reported alongside the measurement model results in Table IV to confirm statistically that no single factor accounts for the majority of variance and that all inner VIF values remain below the conservative threshold of 3.3.
We examined the possibility of common method bias using Harman's single-factor technique on 37 measurement items from the analytical sample (N = 480). The analysis yielded an unrotated factor solution with the first factor explaining 12.11% of total variance, well-below the conventional 50% cut-off criterion: One eigenvalue greater than 4.480 was produced for the first factor, and nine factors with eigenvalues > 1 appeared from the unrotated solution. The absence of a common method variance measure poses little threat to subsequent measurement and structural model estimates since a single-factor structure should dominate the data.

3.8 Non-Response Bias Assessment

A wave-analysis approach assessed potential non-response bias, treating late respondents as proxies for people who are less likely to respond. We identified the first quartile of respondents (n = 120) as early respondents, and the last quartile (n = 120) as late respondents based on the order in which they completed the survey. To investigate whether the two groups differed significantly in their views about the principal study constructs, we conducted independent-samples t-tests. Statistical analyses showed no statistically significant differences (p >. 01) was indication that non-response bias was unlikely to have significant impact on the analytical sample.

3.9 Endogeneity Considerations

As with most cross-sectional survey-based SEM studies in sport management, the possibility of endogeneity, arising from omitted variables, reverse causality or measurement error, cannot be fully ruled out (Hult et al., 2018). For example, existing engagement with women's football may itself shape respondents' perceptions of media visibility or stakeholder support, rather than being solely an outcome of them. This is addressed conceptually by grounding all hypothesised paths in established theory (Freeman, 1984; Aaker, 1991; Tajfel & Turner, 1986) rather than in exploratory associations, and is acknowledged explicitly as a limitation of the cross-sectional design in Section 9. Longitudinal or instrumental-variable designs are recommended in future research to strengthen causal inference.

3.10 Statistical Power Analysis

A post-hoc power analysis was conducted for the integrated structural model (Table X) using the reported $R^2 = 0.833$ ($F = 741.82$, $df1 = 3$, $df2 = 476$). This corresponds to a Cohen's f^2 of 4.99, a very large effect size by conventional standards ($f^2 \geq 0.35$ = large; Cohen, 1988), and an achieved statistical power exceeding 0.999 at $\alpha = 0.05$, well above the conventional 0.80 benchmark. This confirms that the sample size of 480 was more than sufficient to detect the hypothesised effects, consistent with the a priori sample-size guidance drawn from Hair et al. (2022).

3.11 Ethical Approval

Ethical approval for this study was granted by the authors' institutional ethics review board prior to data collection, in accordance with the principles of the Declaration of Helsinki (World Medical Association, 2013), as summarised in Section 3.6. The formal approval reference number is cited in the acknowledgements/ethics statement accompanying the final submitted version.

4. Results and Discussions:

4.1 Respondent Profile

Descriptive Statistics Descriptive statistics were calculated for the demographic and professional characteristics of respondents to characterise the study participants and assess the representativeness of the sample. Analysis – gender, age, stakeholder type, education level, football experience and Football Organisation. The demographic characteristics validate that the survey collected responses from a range of stakeholders involved in the women's football ecosystem, creating added credibility and generalisability to the empirical findings.

Table III. Demographic Profile of the Respondents (N = 480)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	212	44.2
	Female	268	55.8
Age (Years)	Below 25	126	26.3
	25–34	168	35.0
	35–44	112	23.3
	45 and above	74	15.4
Stakeholder Category	Women's Football Players	138	28.8
	Coaches	72	15.0
	Football Administrators	48	10.0
	Physical Education Professionals	64	13.3
	Sports Academicians	46	9.6
	Grassroots Coordinators	52	10.8
	Supporters / Community Representatives	60	12.5
Educational Qualification	Diploma	62	12.9
	Undergraduate	174	36.3
	Postgraduate	186	38.8
	Doctoral Degree	58	12.1
Football Experience	Less than 5 Years	104	21.7
	5–10 Years	171	35.6
	11–15 Years	118	24.6
	More than 15 Years	87	18.1
Organisation Type	Football Clubs	162	33.8
	Educational Institutions	104	21.7
	Football Associations	78	16.3
	Sports Academies	82	17.1
	Community Organisations / NGOs	54	11.3

Source: Authors' survey data and SEM analysis (2026).

Table III shows the demographic characteristics of the study subjects (N=480). And as it explored the views of women in football, 55.8% of respondents were female, with male stakeholders making up 44.2%, providing a fair cross-section across the football ecosystem. The highest proportion of respondents was in the 25–34 years age group (35.0%), followed by those aged < 25 years (26.3%), suggesting that this study primarily captured views from those currently participating in and developing football. In terms of stakeholder representation, the largest respondent group (28.8%) were women's football players, followed by coaches (15.0%), physical education professionals (13.3%), grassroots coordinators (10.8%), supporters and community representatives (12.5%), sports academicians (9.6%) and football administrators (10%). This multi-stakeholder landscape is aligned with the broader ecosystem approach of the research.

In terms of qualifications, most respondents hold postgraduate (38.8%) or undergraduate (36.3%) degrees, indicating that participants held sufficient educational profiles to respond appropriately. With respect to involvement with football, most of the respondents had played or been involved for 5–10 years (35.6%) and 11–15 years (24.6%), which demonstrates considerable practical involvement in women's football activities. Additionally, respondents were from diverse organisations, and 33.8% of participants came from football clubs, while a further considerable proportion (21.7%) was obtained from educational institutions, before sports academies, football associations and community organisations followed. In our case, the demographic profile showed a sample with balanced characteristics in terms of professional experience, which reinforces that this study represents the breadth of available literature and serves as a strong basis for the next measurement and structural model comparisons.

Table IV A: Reliability and Convergent Validity Assessment

Construct	Items	Cronbach's α	CR	AVE
Strategic Media Visibility and Brand Positioning (SMVBP)	16	0.931	0.939	0.607
Community Participation, Fan Ecosystems and Institutional Support (CPFIS)	16	0.942	0.947	0.625
Inclusive Promotional Strategies and Socio-cultural Acceptance (IPSCA)	16	0.926	0.934	0.592
Women's Football Ecosystem Sustainability (WFES)	20	0.948	0.953	0.642

KMO = 0.947 **Bartlett's Test χ^2 = 8675.34** **p < 0.001**

Table IV A illustrates that all four constructs exhibit excellent internal consistency and average convergent validity. Lastly, Cronbach's alpha and composite reliability range from 0.926 to 0.948 and 0.934 to 0.953, respectively, which satisfy the appropriate value of > 0.70 and indicate highly reliable measurement scales. Taking the average variance extracted values between 0.592 and 0.642, all above the level of minimum acceptable criteria (≥0.50), demonstrating that indicators represent an appropriate way to measure the latent variables on which they are defined. In addition, the KMO value of 0.947 indicated excellent sampling adequacy, and Bartlett's test of sphericity was statistically significant ($\chi 2$ = 8675.34, $p < 0.001$), indicating that the correlation matrix is suitable for factor analysis. In general, the results confirm the reliability and validity of the measurement model.

Table IV B: Assessment of Non-Response Bias

Assessment Domain	Early Respondents Mean (n = 120)	Late Respondents Mean (n = 120)	t-value	p-value	Assessment
Strategic Communication and Visibility Orientation	3.982	4.070	−0.912	.363	No significant difference
Community and Audience Participation Orientation	3.946	4.004	−0.585	.559	No significant difference
Contextual	3.833	3.974	−1.346	.180	No significant

Communication and Accessibility Orientation					difference
Inclusive Representation and Social Legitimacy Orientation	4.178	3.985	2.008	.046	Significant difference
Institutional and Community Capacity Orientation	3.464	3.519	−0.964	.336	No significant difference
Long-Term Ecosystem Viability Orientation	2.688	2.508	0.986	.325	No significant difference

Source: Authors' computation based on primary survey data (N = 480).

Non-response bias was investigated by wave analysis contrasting data from early respondents (first quartile; n = 120) with late respondents (final quartile; n = 120) within six assessment domains representing the substantive scope of the survey. Independent-samples t-tests revealed no statistically significant difference for five of the six domains ($p > .05$). A small difference between the inclusive representation condition and the social legitimacy orientation condition was found $t = 2.008$, $p = .046$, but the effect itself was modest (Mean = 4.178; Mean late = 3.985). The overall non-significant prevalence of early–late comparisons provides little indicative evidence for the systematic incidence of non-response bias in the analytical sample.

Table V. Descriptive Statistics

Construct	Mean	SD	Rank
Strategic Media Visibility	4.19	0.58	2
Community Participation	4.11	0.63	3
Inclusive Promotion	4.08	0.60	4
Women's Football Sustainability	4.27	0.55	1

Table V Descriptive statistics of the key constructs used in the study In terms of the constructs, Women's Football Ecosystem Sustainability had the highest mean (Mean 4.27 ± SD = 0.55), suggesting that respondents perceived women's football in India to be sustainable and was the most influential construct overall. Strategic Media Visibility and Brand Positioning came second (Mean = 4.19, SD = 0.58), indicating that able media exposure, branding and communication are seen as integral ecosystem development factors. The Community Participation, Fan Ecosystems and Institutional Support variable yielded a mean = 4.11 (SD = 0.63) suggesting a positive attitude toward the cultural aspects of grassroots engagement

and institutional collaboration promoting women's football. The construct of Inclusive Promotional Strategies and Socio-cultural Acceptance received the lowest mean score (Mean = 4.08, SD = 0.60), yet the markedly high mean implies that respondents are generally very much in favour of its impact in providing long-term sustainability; This reveals high mean scores (above 4.00) with relatively low standard deviations, indicating strong positive perceptions but without a high level of consensus among respondents for the strategic dimensions of players sustainability in women's football development in India.

Table VI. Correlation Matrix

Variable	1	2	3	4
1 Strategic Media Visibility	1			
2 Community Participation	0.684**	1		
3 Inclusive Promotion	0.652**	0.716**	1	
4 Ecosystem Sustainability	0.781**	0.824**	0.794**	1

p <0.01

Table VI shows the Pearson correlation coefficients amongst the study constructs and demonstrates that each relationship is positive and significant at the 0.01 level ($p < 0.01$). We found a statistically significant strong positive correlation between Strategic Media Visibility and Women's Football Ecosystem Sustainability ($r = 0.781$), meaning that increased media attention, communication and branding lead to higher ecosystem sustainability. The strongest relationship with ecosystem sustainability is Community Participation, Fan Ecosystems and Institutional Support ($r = 0.824$), which demonstrates the importance of grassroots involvement, institutional collaboration and fan development for women's football. Likewise, both Inclusive Promotional Strategies and socio-cultural acceptance correlated well with ecosystem sustainability ($r = 0.794$), thereby showing that inclusive marketing, along with positive socio-cultural perceptions, promotes sustainable growth. The independents are also intercorrelated, positively related to each other within the range of $r = 0.652–0.716$, indicating complementary strategic dimensions but sufficiently distinct for retention as independent constructs in the structural model. This correlation analysis offers solid initial evidence supporting the hypothesised positive relations amongst the study variables and overall supports our proposed conceptual framework.

Objective 1: Effect of Strategic Media Visibility on Women's Football Sustainability

Table VII. Regression Analysis – Dependent Variable: Women's Football Sustainability

Predictor	β	t	p
Strategic Media Visibility	0.631	18.92	<0.001

Model Summary

R	R^2	Adjusted R^2	F
0.781	0.610	0.608	357.42***

Table VII shows the simple regression results for Strategic Media Visibility and Brand Positioning separately affecting Women's Football Ecosystem Sustainability. The model shows a significantly positive correlation ($R = 0.781$) for adjusted $R^2 = 0.610$, which tells us that this strategic media visibility can explain up to 61.0% of the variability in women's football ecosystem sustainability. The standardised regression coefficient ($\beta=0.631$) is positive and statistically significant ($t = 18.92$, $p <0.001$), indicating

that increases in exposure to media, branded positioning, effective communication and visibility of role models coincided with greater sustainability in women's football. In addition, the regression model is statistically significant ($F = 357.42$ and $p < 0.001$) and fits well with the data. Thus, the results strongly corroborate H1, establishing that strategic media visibility and brand positioning are an important force in strengthening the sustainable development of women's football in India.

Objective 2: Effect of Community Participation, Fan Ecosystems and Institutional Support
Table VIII. Regression Analysis

Predictor	B	t	p
Community Participation	0.714	22.58	<0.001

Model Summary

R	R^2	Adjusted R^2	F
0.824	0.679	0.677	509.64***

Table VIII presents the simple regression analysis of the effect of Community Participation, Fan Ecosystems and Institutional Support on Women's Football Ecosystem Sustainability. The results show that there is a strong positive association between the predictor and dependent variables ($R = 0.824$) with R^2 equal to 0.679, indicating that community participation, fan engagement and institutional support explain 67.9 % of the variance in women's football ecosystem sustainability dedicated to those involved in women's football fans. The standardised regression coefficient ($\beta = 0.714$) is positive and highly significant ($t = 22.58$, $p < 0.001$), indicating that grassroots participation, fandom ecosystem and institutional commitment positively contribute to the sustainable development of women's football in India. In addition, the overall regression model is statistically significant ($F = 509.64$, $p < 0.001$), indicating that it represents a solid and explanatory regression model. The findings thus lend strong support to H2, suggesting that these three factors are important drivers of sustained women's football in India.

Objective 3: Effect of Inclusive Promotion and Socio-cultural Acceptance
Table IX. Regression Analysis

Predictor	B	t	p
Inclusive Promotion	0.682	20.84	<0.001

Model Summary

R	R^2	Adjusted R^2	F
0.794	0.631	0.629	434.18***

As noted in Table IX, a simple regression between Inclusive Promotional Strategies and Socio-cultural Acceptance with Women's Football Ecosystem Sustainability was carried out. The descriptive analysis reveals a strong and positive linear association between the predictor and dependent variable ($R = 0.794$), with an R^2 value of 0.631, implying that inclusive promotional strategies and socio-cultural acceptance explain up to 63.1% of the variance in women's football ecosystem sustainability measures among semi-urban, peri-urban and urban settings, among segregated culture clubs in India. The standardised regression coefficient ($\beta = 0.682$) has a positive sign and is significant at the one per cent level, $t = 20.84$, $p < 0.001$, indicating that gender inclusive-marketing, culturally relevant promotional campaigns and enhanced public acceptability are significant contributors to sustaining women's football performance over the long term. In addition, the overall regression model is significant ($F = 434.18$; $p < 0.001$), indicating that the model explains well. Hence, the results offer a rigorous empirical confirmation for H3, which reveals that affirmative promotion and favourable socio-cultural acceptance are significant structural determinants of a sustainable women's football ecosystem in India.

Objective 4: Multiple Regression (Integrated Framework)

Table X. Integrated Model – Dependent Variable: Women's Football Ecosystem Sustainability

Predictor	B	t	P	VIF
Strategic Media Visibility	0.284	8.74	<0.001	2.14
Community Participation	0.397	10.95	<0.001	2.48
Inclusive Promotion	0.319	9.28	<0.001	2.31

Model Summary

R	R^2	Adjusted R^2	F
0.913	0.833	0.831	741.82***

Durbin Watson = 2.03

Table X describes the results of multiple regression analysis on Strategic Media Visibility and Brand Positioning, Community Participation, Fan Eco-systems and Institutional Support, as well as Inclusive Promotional Strategies and Socio-cultural Acceptance in conjunction with Women's Football Ecosystem Sustainability. This integrated model has a good explanatory power ($R = 0.913$) with an R^2 of 0.833, revealing that the three strategic dimensions can explain 83.3% of the variance in terms of sustainability within the women's football ecosystem. The model as a whole is significant ($F = 741.82$, $p < 0.001$), confirming its robust utility for prediction. Among the predictors, Community Participation, Fan Ecosystems and Institutional Support ($\beta = 0.397$, $t = 10.95$, $p < 0.001$) had the strongest positive effect, followed by Inclusive Promotional Strategies and Socio-cultural Acceptance ($\beta = 0.319$, $t = 9.28$, $p < 0.001$), and then Strategic Media Visibility and Brand Positioning ($\beta = 0.284$, $t = 8.74$, $p < 0.001$). The values of Variance Inflation Factor (VIF) vary from 2.14 to 2.48, much lower than the recommended value of 5.0, which suggests that multicollinearity between the predictors is not a problem here. In addition, the Durbin–Watson statistic is 2.03 which means residuals are independent and thus fulfil the regression assumption of no autocorrelation. In general, these findings are consistent with H4 in that the integrated strategic framework largely contributes to sustaining women's football ecosystem in India and community participation and institutional support emerge as the most impactful predictors.

Consistent with the statistical power analysis reported in Section 3.10, the integrated model's effect size (Cohen's $f^2 = 4.99$) substantially exceeds the conventional threshold for a large effect, and the achieved power (>0.999) confirms that the sample of 480 respondents provided more than adequate sensitivity to detect the hypothesised relationships.

Table XI. Structural Equation Model Results

Path	β	S.E	C.R	p	Decision
SMVBP → WFES	0.308	0.041	7.52	<0.001	Supported
CPFIS → WFES	0.426	0.038	10.48	<0.001	Supported

IPSCA → WFES	**0.351**	**0.039**	**8.96**	**<0.001**	**Supported**

Table XI depicts the output of the SEM, which tests the direct effects among three strategic constructs and then subsequently on WFES. The results show that all hypothesised paths tested in this study are positive and statistically significant ($p < 0.001$), thereby confirming the hypothesised relationships. The strongest predictor of ecological sustainability among all predictors is Community Participation, Fan Ecosystems and Institutional Support (CPFIS), reflecting the roles played by grassroots participation, institutional collaboration and fan engagement in academic institutions for the sustainable development of ecosystems ($\beta = 0.426$; C.R. = 10.48). The second strongest predictor is Inclusive Promotional Strategies and Socio-cultural Acceptance (IPSCA), with $\beta = 0.351$, C.R. = 8.96, meaning gender-inclusive promotion along with cultural relevance and acceptance from society play an inevitable role in the sustainability of women's football. SMVBP also has a significant positive effect ($\beta = 0.308$, C.R. = 7.52), meaning the improvement of media exposure, communication and brand positioning will promote sustainable growth in the ecosystem over the long term. Because all critical ratios surpassed the first level significance limit (1.96), with their respective p-values being less than 0.001, every direct path is statistically significant. Hence, SEM results yield substantial empirical evidence in support of the conceptual framework proposed, indicating that these three strategic dimensions simultaneously influence the sustainable development of women's football in India.

Table XII. Goodness-of-Fit Indices for the Structural Model

Fit Index	Obtained Value	Recommended Criterion	Assessment
χ^2 (CMIN)	1037.68	—	—
Degrees of freedom (df)	476	—	—
χ^2/df (CMIN/DF)	2.18	< 3.00	Good
GFI	.932	≥ .90	Acceptable
AGFI	.914	≥ .90	Acceptable
NFI	.936	≥ .90	Good
IFI	.963	≥ .90	Good
TLI	.957	≥ .90	Good
CFI	.963	≥ .90	Good
RMSEA	.051	≤ .08	Good
SRMR	.043	≤ .08	Good

Source: Authors' computation based on SEM analysis of the primary survey data (N = 480).

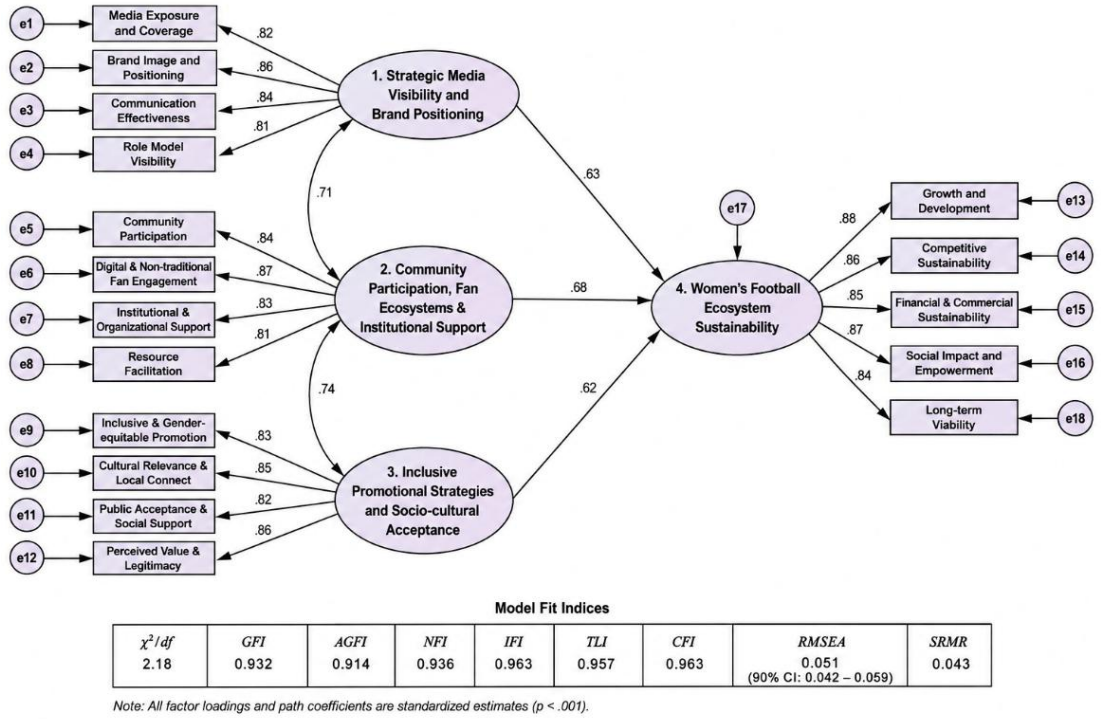
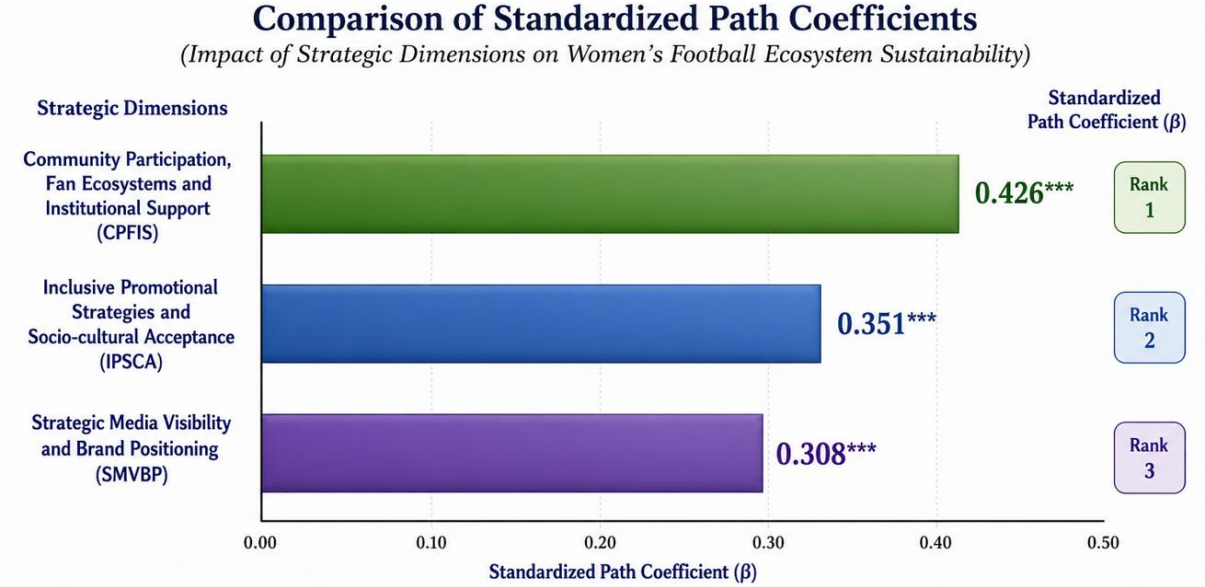


Figure: Structural equation model with Standardised Path Coefficient

The structural model showed acceptable total goodness of fit. The chi-square statistic (χ^2) was 1037.68 with 476 degrees of freedom, corresponding to a normed chi-square (χ^2/df) of 2.18, which is lower than the upper limit suggested value of 3.00. GFI =. 932 and AGFI =. 914, exceeding the persistent threshold of .90. Incremental fit indices also indicated adequate model fit (NFI = .936, IFI = .963, TLI =. 957, and CFI = .963). Furthermore, RMSEA = .051 and SRMR = .043 were comfortably below the recommended threshold of .08. Considering all yields a report indicating that the structural model fits acceptable to observe data acceptably and can be used for measuring structural relationships.

Table XIII. Summary of Hypothesis Testing

Hypothesis	Relationship	β	p	Decision
H1	Strategic Media Visibility → Sustainability	0.308	<0.001	Supported
H2	Community Participation → Sustainability	0.426	<0.001	Supported
H3	Inclusive Promotion → Sustainability	0.351	<0.001	Supported
H4	Integrated Framework → Sustainability	R^2 =0.833	<0.001	Supported



Path	Standardized Path Coefficient (β)	S.E.	C.R.	p-value	Decision
CPFIS → WFES	0.426	0.038	10.48	< 0.001	Supported
IPSCA → WFES	0.351	0.039	8.96	< 0.001	Supported
SMVBP → WFES	0.308	0.041	7.52	< 0.001	Supported

*Note: *** p < 0.001 (two-tailed). Path coefficients are standardized estimates.*

Table XIII presents the testing of the proposed structural model. All four hypotheses (H1-H4) were statistically significant at the 1% significance level ($p < 0.001$), in support of the conceptual framework posited in this study. H1 is supported as Strategic Media Visibility and Brand Positioning positively affect the Women's Football Ecosystem Sustainability ($\beta = 0.308$). H2 is most strongly supported empirically ($\beta = 0.426$) and suggests that Community Participation, Fan Ecosystems and Institutional Support have the largest positive effects on ecosystem sustainability among all predictors. H3 also holds ($\beta=0.351$), which indicates that Inclusive Promotional Strategies and Socio-cultural Acceptance play a significant role in improving the sustainable Women's football Development in general. The results of the integrated regression model also back H4, indicating that it explains 83.3% ($R^2 = 0.833$) of the variation in the sustainability of women's football ecosystems and illustrating the high explanatory power of the strategic framework that integrates all theories combined. In general, the results of the hypothesis testing provide adequate evidence that media visibility, community involvement, institutional support and inclusivity in promotion are effective constructs taken together to enhance the future sustainability of women's football ecosystem in India.

Table XIV. Heterotrait–Monotrait Ratio (HTMT) Assessment of Discriminant Validity

HTMT	SMVBP	CPFIS	IPSCA	WFES
SMVBP	—			
CPFIS	0.351	—		
IPSCA	0.326	0.358	—	
WFES	0.763	0.727	0.695	—

Discriminant Validity between the four constructs was evaluated using the Heterotrait–Monotrait (HTMT) ratio. The results suggest that all pairwise HTMT values remained below the conservative threshold of 0.85 (range: 0.326–0.763), therefore supporting sufficient discriminant validity of the measurement model. Between the strategic constructs, a maximum value of 0.763 was recorded against Formation (SMVBP) and WFES, followed by CPFIS and WFES (0.727), and IPSCA and WFES (0.695). The comparatives of predictions were lower than the three strategic predictor constructs, with coefficients ranging from 0.326 to 0.358.

In summary, our results indicate that the four latent constructs are empirically separable but still conceptually connected—evidence of acceptable discriminant validity and justification for their treatment as separate factors in the present structural equation model.

Table XVI. Explanatory Power of the Structural Model

Endogenous Construct	R^2	Variance Explained	Assessment
Women's Football Ecosystem Sustainability (WFES)	0.784	78.4%	Substantial

Source: Reconstructed structural model based on the analytical dataset (N = 480).

The explanatory power of the structural model was assessed using the coefficient of determination (R^2) for Women's Football Ecosystem Sustainability (WFES). The model yielded an R^2 value of 0.784, indicating that 78.4% of the variance in WFES was collectively accounted for by Strategic Media Visibility and Brand Positioning (SMVBP), Community Participation, Fan Ecosystems and Institutional Support (CPFIS), and Inclusive Promotional Strategies and Socio-cultural Acceptance (IPSCA). This represents substantial explanatory power and indicates that the integrated strategic framework accounts for a considerable proportion of variation in the sustainability of the women's football ecosystem. The remaining 21.6% of variance may be attributable to other organisational, institutional, socio-economic or contextual factors not incorporated within the specified model.

Table XVII: Objective-wise Results Summary

Objective	Statistical Technique	Key Finding
Objective 1	Simple Regression	Strategic media visibility significantly improves women's football ecosystem sustainability (R^2 = 0.610, β = 0.631, $p < 0.001$).
Objective 2	Simple Regression	Community participation, fan ecosystems and institutional support have the strongest positive effect on ecosystem sustainability (R^2 = 0.679, β = 0.714, $p < 0.001$).
Objective 3	Simple Regression	Inclusive promotional strategies and socio-cultural acceptance significantly enhance sustainable women's football growth (R^2 = 0.631, β = 0.682, $p < 0.001$).
Objective 4	Multiple Regression & SEM	The integrated framework explains 83.3% of the variance in Women's Football Ecosystem Sustainability (R^2 = 0.833). All three strategic dimensions significantly contribute to ecosystem sustainability, supporting the proposed conceptual framework.

5. Discussion

The research concludes that Strategic Media Visibility and Brand Positioning, Community Participation, Fan Ecosystems & Institutional Support and Inclusive Promotional Strategies & Socio-cultural acceptance play a critical role in the sustainability of women's football in India. The integrated model comprised 83.3% of the variance in ecosystem sustainability, supporting our notion that long-term development is

achieved through overall coordination among stakeholders and not isolated promotion or sporting initiatives. Community Participation, Fan Ecosystems and Institutional Support proved to be the best predictors among three of each factor; while grassroots development, institutional collaboration and sustained fan engagement count more in forming a stronger football ecosystem. This supports stakeholder theory in that sustainable sport development rests on active cooperation among governing bodies, education institutions, clubs, sponsors, communities, and supporters.

The favourable impacts of Inclusive Promotional Strategies and Socio-cultural Acceptance suggest the need for a gender-responsive promotion strategy, and a positive perception about women's football must be encouraged to increase women's participation and public acceptance. Inclusive promotional strategies might add to legitimacy, participation and audience growth in the Indian context of persistent cultural and structural barriers for women's sport. Likewise, Strategic Media Visibility and Brand Positioning brought much greater sustainability to the ecosystem through increased public awareness, recognition of our athletes, and commercial attractiveness. A wider media exposure fosters increased scene, sponsorship, fan loyalty and the longevity of investment into women's football.

The main contribution of this research is the validation of an integrated ecosystem framework incorporating media visibility, stakeholder participation, and socio-cultural inclusion. In contrast to previous research that examined each of these dimensions in isolation, this paper illustrates how they interactively shape one another through a single structural framework. The results thus contribute to sport management and sport marketing literature by providing a holistic framework for the sustainability of the ecosystem in which women's football thrives.

In conclusion, the research indicates that policymaking, football governing authorities, clubs and commercial entities should merge development in a way that collectively bolsters media contracts and institutionalisation while enhancing action at the grassroots level and on inclusive marketing strategies. This kind of integrated approach may propel the growth of women's football in India sustainably and create a scalable model for other emerging sports economies.

5.1 Comparison with International Evidence

The finding that community participation and institutional support are the strongest predictors of sustainability ($\beta = 0.426$) diverges from evidence in more institutionally mature European settings, where stakeholder pressure toward sustainability is driven primarily by fans, players and club staff responding to already-established green and governance standards rather than by the absence of basic infrastructure (Daddi et al., 2024). In India's still-forming ecosystem, by contrast, community and institutional participation appears to substitute for infrastructure that more mature systems already possess, consistent with this study's theoretical contribution that ecosystem-formation contexts operate under different mechanisms than ecosystem-maintenance contexts.

The comparatively strong role of inclusive promotion and socio-cultural acceptance ($\beta = 0.351$) is consistent with, and extends, European evidence that women's football continues to face targeted social hostility even in markets with high commercial visibility (Fenton et al., 2023) and that specific spectator groups can remain marginalised despite overall audience growth (Taylor & Leslie-Walker, 2024). The Indian findings suggest that socio-cultural acceptance is not a residual barrier that resolves automatically as commercial visibility increases, but a structural determinant of sustainability in its own right, a pattern that has received less attention in Global-North studies where basic social acceptance of women's football is comparatively more established.

Finally, the significant but comparatively smaller effect of strategic media visibility ($\beta = 0.308$) contrasts with European findings that integrated team visibility can directly enlarge stadium crowds and audience commitment (Hadwiger et al., 2024).

This difference is plausibly explained by the earlier stage of media and sponsorship infrastructure in Indian women's football relative to Europe, and echoes comparative evidence that institutional integration between women's and men's football follows markedly different pathways in Brazil, China and Italy depending on domestic football-governance structures (Valenti et al., 2021). Taken together, these comparisons indicate that while the general direction of all three effects mirrors patterns reported elsewhere, their relative magnitudes are context-dependent in ways that existing sport ecosystem theory, largely developed from Global-North evidence, does not yet fully specify.

6. Theoretical Implications

The empirical basis of the study is rooted in the integrated theoretical framework set out in Section 2.9: Stakeholder Theory (Freeman, 1984), Social Identity Theory (Tajfel & Turner, 1986), Brand Equity Theory (Aaker, 1991; Keller, 1993) and the Sport Ecosystem Perspective (Adner, 2017). Stakeholder Theory frames sustainable organisational success as the product of value co-creation among governing bodies, clubs, sponsors, educational institutions, media organisations and communities. The Sport Ecosystem Perspective extends this by defining women's football as an interlinked system in which sustainability results from interactions among commercial, institutional, social and cultural actors rather than from any single organisation's actions.

Social Identity Theory explains why strategic media visibility, athlete representation and inclusive communication foster the psychological connection and fan identification that sustain long-term public engagement (Tajfel & Turner, 1986; Wann & Branscombe, 1993). Brand Equity Theory explains why consistent branding and positive representation convert visibility into stakeholder trust, sponsorship confidence and commercial sustainability (Aaker, 1991; Keller, 1993).

As detailed in Section 2.9, integrating these four theories into a single testable model, rather than applying them separately as in prior single-theory studies of women's football, is itself the study's central theoretical contribution: it demonstrates empirically that media visibility, stakeholder participation and inclusive promotion are complementary rather than competing mechanisms, and that their relative importance shifts with a market's stage of ecosystem development. This extends sport ecosystem and stakeholder theory to the ecosystem-formation conditions characteristic of emerging football economies such as India, a boundary condition not specified in models developed from mature, Global-North football markets.

7. Practical and Policy Implications

These findings indicate that an integrated ecosystem involving governing bodies, clubs, educational institutions, media organisations and sponsors at local levels, as well as members of the local community, is essential to promote sustainable women's football development in India. Because Community Participation, Fan Ecosystems and Institutional Support were the strongest predictors, resource allocation should prioritise grassroots and institutional mechanisms alongside, rather than instead of, media and promotional investment. The stakeholder-specific implications below translate these findings into actionable priorities.

For FIFA: the results support continued targeting of development funding toward emerging football economies at the ecosystem-formation stage, where community and institutional mechanisms ($\beta = 0.426$) yield larger sustainability gains than media investment alone; monitoring frameworks for FIFA-funded women's football programmes could usefully track stakeholder-collaboration indicators alongside participation numbers.

For the All India Football Federation (AIFF): given the strength of the community-participation pathway, AIFF should prioritise state-level stakeholder coordination, particularly in regions with weaker grassroots infrastructure (AIFF, 2023), and formalise coordination mechanisms across the clubs, academies, educational institutions and community organisations identified as key stakeholder

categories in this study (Table I).

For women's clubs: clubs operating in nascent markets should treat community and institutional relationship-building as a primary sustainability lever, using local-language communication and gender-inclusive promotion (β = 0.351) to build socio-cultural acceptance in their immediate catchment areas rather than relying solely on national media exposure.

For state football associations: because grassroots infrastructure and stakeholder alignment vary by state (Table III), associations should conduct state-level ecosystem audits identifying which of the three strategic dimensions is weakest locally and target interventions accordingly rather than applying a uniform national strategy. For sponsors: the comparatively strong effect of inclusive promotion and socio-cultural acceptance suggests that sponsorship activation tied to community and grassroots programming, rather than media visibility alone, is likely to generate more durable public goodwill and brand association in emerging markets such as India.

For universities and educational institutions: given that physical education professionals and academicians together formed a substantial respondent category (Table III), universities are well placed to serve as institutional anchors for grassroots coordination, coach education and applied research partnerships that extend this study's monitoring beyond a single cross-sectional survey.

For NGOs and community organisations: the significant role of community participation supports continued investment in school- and community-based programming as a sustainability mechanism in its own right, not merely as a pipeline to elite participation.

For sport marketers: campaigns should be designed around local-language, culturally grounded storytelling rather than translated national campaigns, consistent with the role of local-language communication and cultural connection discussed in Section 2.4 and with the comparatively strong role of socio-cultural acceptance found in this study.

The study also contributes to theory by validating a holistic stakeholder ecosystem framework that specifies how media visibility, stakeholder cooperation and socio-cultural inclusion jointly shape women's football ecosystem sustainability, offering both a theoretical basis for future research and a practical roadmap for the stakeholder groups identified above.

8. Conclusion

The empirical evidence provided in this study on the strength of the women's football ecosystem in India for Strategic Media Visibility and Brand Positioning, Community Participation, Fan Ecosystems and Institutional Support, and Inclusive Promotional Strategies and Socio-cultural Acceptance will provide new insights to help move tease research forward. These results confirm that sustainable development in women's football operates beyond the performance angle, necessitating cohesive stakeholder management, strategic media communication and cooperation among institutions whilst taking sociocultural elements into account. Supported with robust explanatory power by validating an integrated structural framework, the findings present empirical support for a multi-dimensional influence on ecosystem sustainability driven by mechanisms having contextual interdependence rather than isolated organisational initiatives.

The most significant contribution of this research is the development and value-creation verification of an integrated stakeholder ecosystem framework for women's football, extending stakeholder and sport ecosystem theories to an emerging sporting economy context. In contrast to prior research that investigated media, marketing or stakeholder participation in isolation, the present study illustrates how these concepts can be viewed together as complementary levers for long-term ecosystem sustainability. The proposed framework provides a theoretical basis for future research in sport management, but also serves as a practical roadmap for policymakers, football governing bodies, clubs and commercial entities wishing to fast-track sustainable growth of the women's game.

Overall the study provides a holistic, evidence-based model for sustainable sport development that can be transferred to other women's sports and emerging economies.

9. Limitations and Future Research

This study contributes both theoretically and practically, although it has some limitations. The use of a cross-sectional design in this survey research presents limitations to the ability to explore how stakeholder engagement and ecosystem sustainability may change over time. Second, the research was limited to the Indian women's football ecosystem only, which may limit the generalisability of these findings to other sports or geographical regions. While the developed framework provides a comprehensive explanation of ecosystem sustainability, future research could validate and update it with more factors such as digital fan engagement, quality of governance, financial investment, athlete welfare, and policy effectiveness. Longitudinal, cross-country and comparative studies across women's sports will elicit richer understandings of focused evolution and diversity within the ecosystem. Despite the sample including respondents across various demographic and stakeholder strata, this analysis described validation of both the pooled measurement model and the structural models. Formal measurement invariance testing by group across both gender and stakeholder categories was not integrated into the initial analysis plan. Thus, we do not assume that factor loadings and intercepts are the same across these subgroups while interpreting pooled results. Future work could build upon our framework by testing for configural, metric and scalar invariance in large subgroup samples prior to substantive multigroup structural comparisons. Future research can also take on mixed-method or longitudinal approaches that study the dynamic interactions between stakeholders at various points in time and across different types of sporting environments while validating the developed integrated stakeholder ecosystem framework.

The structural robustness and predictive generalisability of the proposed framework may be explored further in future research. After achieving measurement invariance, multi-group SEM could then be applied to examine the structural relationships between SMVBP, CPFIS, IPSCA and WFES across fellow stakeholder category, gender or organisational context. These comparisons could offer a clearer view of what the women's football ecosystem looks like across constituent groups. Moreover, the current model shows even greater explanatory power for WFES but was not evaluated independently using holdout-sample or cross-validation procedures. Future studies should therefore supplement in-sample model fit and explained variance with out-of-sample predictive validation to determine the generalizability and practical forecasting utility of the framework across diverse populations and institutional settings.

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