

SYNERGIZING BUSINESS MODEL INNOVATION, QUALITATIVE COMPARATIVE ANALYSIS, AND MANAGEMENT INFORMATION SYSTEMS IN SPORTS MANAGEMENT

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ABSTRACT: This study investigates the incorporation of Management Information Systems (MIS) within sports management in China, focusing on the cultural, regulatory, and practical challenges and opportunities associated with this transformative process. The research aims to address an empirical gap by examining the adaptability of MIS in the context of China's unique cultural and regulatory environment. Employing semi-structured interviews analysed through thematic analysis, the study involved 14 participants who are experts in MIS and sports management in China. The qualitative data was analysed using a three-step coding process. The research seeks to provide a comprehensive understanding of MIS integration, encompassing financial, cultural, and collaborative dimensions. Findings reveal that while MIS holds significant transformative potential, it faces challenges related to financial constraints, cultural alignment, and strategic integration. Key themes identified include MIS's role in organizational workflow, fan engagement, and player performance analysis. This research underscores the importance of leveraging technology in Chinese sports management and fills an empirical gap by offering insights into the real-time integration of MIS in this sector. The study provides valuable information for policymakers, sports organizations, and industry stakeholders, highlighting the complexities of sports management in China.

Keywords: Business Model Innovation, Qualitative Comparative Analysis, Management Information Systems, Sports Complex, Opportunity Development, Resource Linkage.

1. Introduction

This study explores the intersection of technological advancement and sports management through the lens of MIS within the Chinese context. As the sports industry increasingly embraces technological innovations (Zeimers et al., 2021), this research investigates the challenges and opportunities associated with integrating MIS into sports management in China. In this rapidly evolving technological environment, the study aims to examine how sports organizations adapt to the complexities of MIS integration (González-Serrano, Añó Sanz, & González-García, 2020), with a particular focus on its impact on player performance analysis, organizational processes, and fan engagement strategies (Grillitsch et al., 2023). The research seeks to uncover how sports entities navigate this dynamic landscape to enhance their effectiveness and strengthen their connections with players and fans. While the integration of MIS in sports holds promise for increased efficiency and transformational shifts, it also presents challenges and cultural considerations that must be addressed (Kallmuenzer et al., 2021). By engaging professionals in MIS and sports management, this study offers valuable insights both academically and practically, providing guidance for policymakers and institutions to effectively navigate the evolving sports management landscape in China.

Building upon existing empirical research on MIS integration in sports management, earlier studies have laid the foundation for understanding the relationship between technological adoption and the sports sector (Su, Zhang, & Ma, 2020). Current empirical evidence suggests that technological advancements have the potential to significantly transform sports organizations, influencing participant performance, operational efficiency, and strategic decision-making (Núñez-Pomar, Escamilla-Fajardo, & Prado-Gascó, 2020; Zhang, Wang, & Liang, 2021). Research into the challenges of MIS implementation, such as budgetary constraints and resistance to change, has highlighted the complexities involved in technology adoption within sports management (Song & Han, 2023; Wang, Wang, & Jiang, 2021). Despite these contributions, there remains a need for further investigation into MIS integration specifically within the Chinese sports industry. This study aims to address this gap by expanding upon previous empirical findings and offering new insights from experts in sports management and MIS. By focusing on the Chinese context, this research seeks to enhance the understanding of both the potential benefits and the challenges associated with MIS integration in the dynamic and rapidly evolving Chinese sports market (Callens, Verhoest, & Boon, 2022). Empirical research

on the integration of MIS in sports management remains limited (Grillitsch et al., 2023). While previous studies have contributed to our understanding of the global impact of technology adoption in sports organizations, there is a notable paucity of empirical research addressing the challenges, opportunities, and cultural factors associated with MIS integration (Sahebalzamani et al., 2023). Most existing empirical research on sports management is focused on Western contexts, overlooking the unique social, cultural, and legal contexts of China (Scuotto, Cicellin, & Consiglio, 2023). This study aims to address this gap by examining both the micro and macro challenges of MIS integration within the Chinese sports industry. It seeks to provide insights that will inform the development of tailored strategies and frameworks that consider the specific complexities of the Chinese sports sector (Martins et al., 2019; Sohrabi et al., 2023). By integrating perspectives from experts in sports management and MIS, this research will contribute to a deeper understanding of MIS integration in China and lay the foundation for more effective and contextually relevant approaches.

This research explores the integration of MIS in Chinese sports management amid rapid technological advancements. It addresses the unique challenges, opportunities, and cultural impacts of MIS adoption in this context, aiming to fill a gap in empirical research. By analyzing insights from experts in sports management and MIS, the study provides both theoretical and practical contributions. The findings are intended to inform strategic decisions for sports organizations, policymakers, and industry stakeholders, advancing the discourse on technology and sports management in China.

2. Literature Review

The field of sports management is undergoing a significant transformation with the integration of MIS, which enhances decision-making, strategic planning, and organizational operations (Risberg, Jafari, & Sandberg, 2023). The implementation of MIS in sports environments involves the coordinated use of data, technology, and information to optimize managerial effectiveness and efficiency (Bashir, Naqshbandi, & Yousaf, 2023). To manage the extensive data generated in sports administration—spanning finance, marketing, fan engagement, and athlete performance monitoring—a robust information infrastructure is essential (González-Serrano et al., 2023; Grandón et al., 2021). Within sports administration, MIS

plays a critical role in analytics, enabling institutions to leverage advanced data analytics for insights into player development, opponent strategies, and audience behaviour. Modern data collection methods effectively monitor injuries, fitness levels, and player metrics (Mancuso, Messeni Petruzzelli, & Panniello, 2023), thereby enhancing training programs and reducing the incidence of accidents. MIS facilitate comprehensive scouting strategies, enabling organizations to identify potential talent and make informed hiring decisions. By analysing customer trends, preferences, and behaviours, MIS allows organizations to refine audience engagement and marketing strategies (Dhir et al., 2023). Tools such as ticketing systems, CRM, and social media analytics enhance understanding of supporter demographics. This, in turn, helps sports teams optimize revenue, foster brand loyalty, and tailor fan experiences (Selcuk & Cizel, 2024). Overall, MIS has revolutionized sports administration by providing data-driven solutions to complex industry challenges.

2.1. Qualitative Comparative Analysis

Qualitative Comparative Analysis (QCA) provides social scientists with a framework for understanding complex patterns and relationships within social phenomena (Chávez-Rivera, Ruíz-Jiménez, & Fuentes-Fuentes, 2024). Utilizing configurational thinking, QCA enables researchers to explore the intricate interactions of variables that lead to specific outcomes (Lefebvre et al., 2024). Unlike quantitative methods that focus on identifying causal correlations, QCA seeks to elucidate the complex linkages that contribute to an outcome (Shen et al., 2024). This method is particularly effective with limited sample sizes, contextual variables, or complex non-linear cause-and-effect relationships (Van Mieghem, Verschueren, & Struyf, 2023). Through set-theoretic reasoning, QCA examines how various factors combine to produce similar or divergent results in pursuit of a goal (Nchanji et al., 2024; Zhu & Ahamat, 2023). It is applied across various academic disciplines, including management, sociology, politics, and policy (Geremew, Huang, & Hung, 2024). QCA allows for a systematic examination of conditions using predefined criteria to develop middle-range theories that accurately reflect the complexity of social systems (Casady, 2024). It is increasingly popular in social science research for its ability to reveal how specific factors influence outcomes, aiding in the understanding of complex systems and events (Grillitsch et al., 2023; Riboldi et al., 2023). For a visual representation of the QCA process, refer to Figure 1.

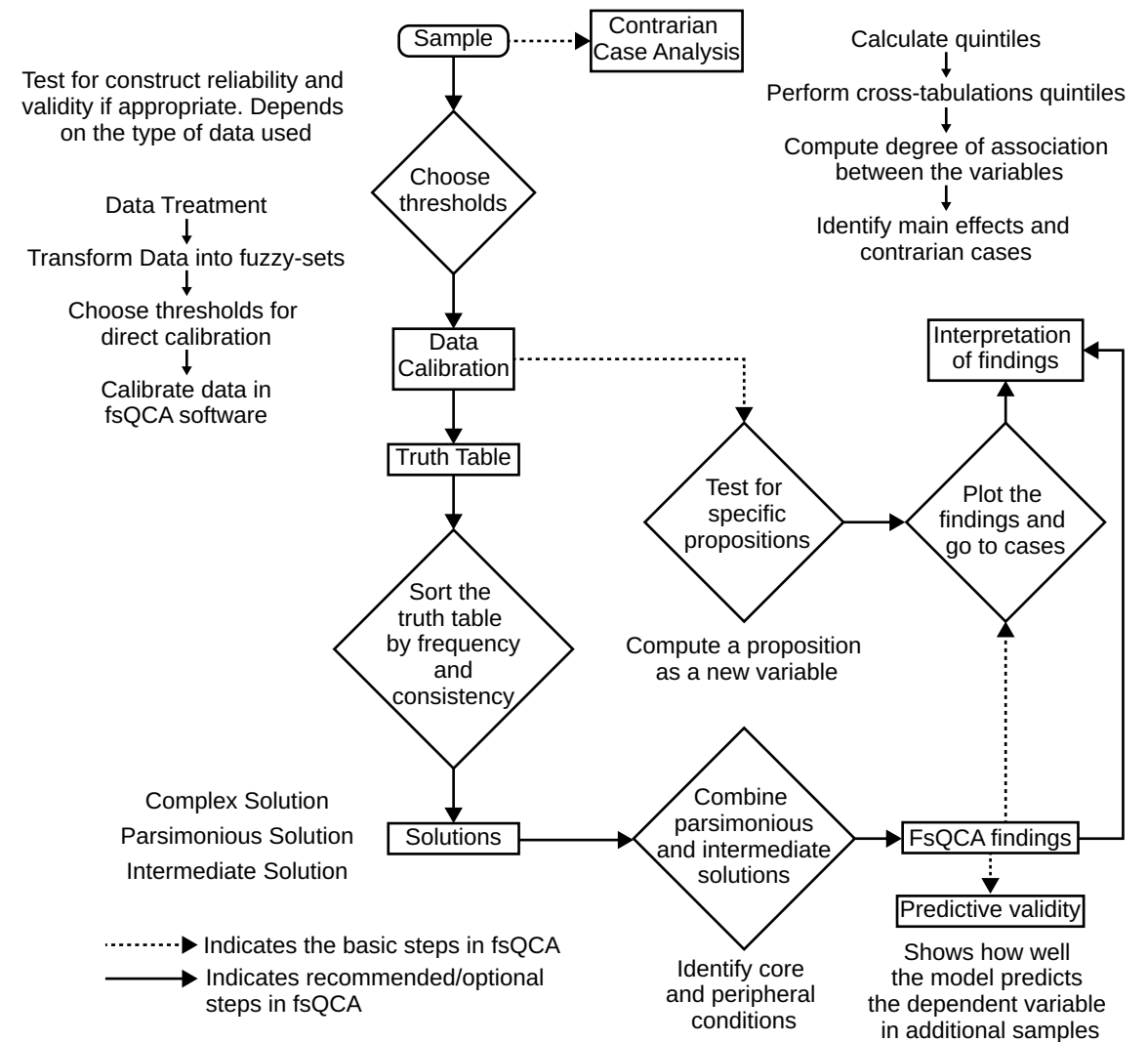


Figure 1: Flow of Qualitative Comparative Analysis.

2.3. Synergizing Business Model Innovation

Success in the contemporary, rapidly evolving business environment necessitates the adoption of innovative company concepts. To implement new strategies, organizations must revise their value propositions, revenue streams, and operational frameworks (Xu, Yang, & Ren, 2020). Effective business model innovation requires a cohesive organizational ecosystem where each component's strengths are leveraged to drive overall innovation (Lv, Wang, & Jin, 2022). An integrated system that transcends mere aggregation is likely to have a more substantial impact. Creating a synergistic business model involves recognizing that new ideas emerge from organization-wide interactions (Liu, Skinner, & Grosman, 2022). For this approach to be effective, a dynamic and collaborative company culture must facilitate interdepartmental cooperation in concept

development, prototyping, and implementation. Coordination among marketing, product development, and customer service is essential to deliver a consistent and distinctive consumer experience (Aghamohammadi, Khosravizadeh, & Mondalizadeh, 2022). Diverse perspectives and skill sets enable firms to adapt to evolving market conditions, consumer preferences, and technological advancements, enhancing their agility in a fluctuating business landscape (Bashir, Naqshbandi, & Farooq, 2020). Synergistic business model innovation can lead to increased revenue (Brenk, 2020). Companies can further add value by conducting market research in related sectors, forming strategic alliances, and expanding their product offerings (Shih, 2021). Business model innovators anticipate shifts in client behaviour and market trends to maintain a competitive edge. Collaboration, integration, and

flexibility are crucial for advancing business models to address emerging challenges (Ullah, Anwar, & Khattak, 2023).

2.4. Resource Linkage

Strategic management within organizations hinges on the effective linkage of resources—integrating and coordinating resources to secure a competitive advantage (Shih, 2021). To foster innovation, companies must connect both tangible and intangible resources. Strategic alignment and resource coordination are crucial for enhancing organizational performance and resilience (Bashir et al., 2020). Resource linkage encompasses the integration of corporate culture, infrastructure, financial capital, and technology. By combining resources and creating synergies, organizations can better adapt to market changes, capitalize on opportunities, and manage risks (Aghamohammadi et al., 2022). Firms with skilled employees and advanced technologies are better positioned to increase productivity and drive innovation in the contemporary business environment. Strategic resource linkage occurs when organizations share capabilities, which may involve forming partnerships with suppliers, customers, or other industry players (Chávez-Rivera et al., 2024; Lv et al., 2022). Such partnerships facilitate competitive ecological systems and resource pooling. Continuous resource connectivity requires strategic planning and adaptability (Nchanji et al., 2024). Organizations must assess their resources, communicate effectively, and allocate investments wisely. This approach enables them to strategically

position themselves in the market and achieve a competitive edge beyond the capabilities of individual resources (Lv et al., 2022). Resource linkage is integral to strategic management, underscoring how coordinated resources can enhance organizational performance in a dynamic business landscape (Bashir et al., 2020).

3. Methodology

This qualitative study focuses on experts in MIS and sports management within China. The study included 14 participants, each a specialist in MIS and sports management, to gain comprehensive insights into their perspectives. Semi-structured interviews were employed as the primary data collection method, allowing participants the flexibility to express their views, experiences, and analyses thoroughly. The interviews were designed to encourage open and detailed responses, ensuring a deep understanding of the participants' perspectives. (See Table 1). The study was conducted in China to leverage the rich qualitative data that reflects the cultural and contextual factors influencing the intersection of MIS and sports management within a diverse landscape. Participants were selected based on their experience and expertise to provide a broad range of perspectives. Using purposive sampling, individuals were chosen for their academic and professional backgrounds, ensuring a variety of viewpoints. This approach was intended to achieve a comprehensive understanding of the case by incorporating diverse insights from experts in the field.

Table 1: Respondents Profile.

Respondent ID	Gender	Age Group	Educational Background	Professional Role	Years of Experience
1	Male	36-45	Master's Degree	Academic	8 years
2	Female	46-55	Doctorate Degree	Industry Professional	12 years
3	Male	25-35	Master's Degree	Policymaker	4 years
4	Female	36-45	Master's Degree	Academic	10 years
5	Male	56 and above	Doctorate Degree	Industry Professional	18 years
6	Female	36-45	Bachelor's Degree	Policymaker	6 years
7	Male	46-55	Doctorate Degree	Academic	15 years
8	Female	25-35	Master's Degree	Industry Professional	7 years
9	Male	46-55	Master's Degree	Academic	14 years
10	Female	36-45	Doctorate Degree	Industry Professional	11 years
11	Male	36-45	Master's Degree	Policymaker	9 years
12	Female	46-55	Doctorate Degree	Academic	16 years
13	Male	25-35	Master's Degree	Industry Professional	3 years
14	Male	46-55	Master's Degree	Academic	13 years

Table 2: Interview Guideline.

Theme	Interview Questions
1. Integration of MIS in Sports Management	1. How do you perceive the current level of integration of MIS in sports management in China? 2. Can you provide examples of successful instances where MIS has been effectively utilized in sports management practices?
2. Challenges in Implementing MIS	1. What challenges do organizations face when implementing MIS in the context of sports management in China? 2. How do these challenges differ across academic, industry, and policymaking perspectives?
3. Opportunities and Innovations	1. From your viewpoint, what opportunities arise from the integration of MIS in sports management in China? 2. Can you share insights on any innovative approaches or strategies that have emerged as a result of this integration?
4. Cultural and Contextual Influences	1. How do cultural and contextual factors impact the implementation and effectiveness of MIS in sports management within the Chinese context? 2. Are there specific cultural nuances that organizations need to consider when adopting MIS?
5. Collaboration and Partnerships	1. To what extent do collaborative efforts and partnerships contribute to the successful integration of MIS in sports management in China? 2. Can you provide examples of effective collaborations that have enhanced MIS utilization in the sports industry?
6. Future Trends and Recommendations	1. What do you foresee as the future trends in the integration of MIS in sports management within the Chinese landscape? 2. Based on your expertise, what recommendations would you provide for organizations looking to enhance their use of MIS in sports management?

The study utilized semi-structured interviews with open-ended questions to gather primary data, fostering open and in-depth conversations (see Table 2). Conducted in-person to provide a more personal and contextual understanding, these interviews aimed to capture participants' perspectives more effectively. The qualitative data were analysed using thematic analysis, employing a three-step coding process (see Table 3). The first phase, open coding, involved identifying themes from the data. The second phase, axial coding, focused on establishing connections between these codes and further developing concepts. The final phase, selective coding, concentrated on identifying

key themes to provide a comprehensive understanding. This thematic analysis facilitated the exploration of emergent themes and insights, contributing both theoretical propositions and practical implications to the fields of MIS and sports management. The study also sought to lay the groundwork for future research in MIS and sports management in China. Propositions were developed through a deductive approach, closely aligned with the identified themes, to ensure that the study's contributions to the existing knowledge base are robust and coherent. The aim was to build on these themes to advance understanding and make significant contributions to the broader field.

Table 3: Analysis Method Flow.

Step	Description
1. Open Coding	In the initial phase, the research team conducted open coding to systematically identify and categorize pertinent data segments from the interview transcripts. Each transcript was meticulously reviewed, and codes were assigned to segments that encapsulated significant concepts or ideas. This approach facilitated the exploration of a broad spectrum of themes without the constraints of predefined categories, thereby promoting a thorough and nuanced understanding of the data.
2. Axial Coding	Subsequent to open coding, the axial coding phase entailed the systematic organization of codes into more comprehensive categories. During this phase, the research team identified connections between codes and discerned relationships among emerging themes. Through collaborative efforts, related codes were grouped into preliminary categories to ensure coherence and consistency. The primary objective of axial coding was to refine the coding framework and establish a structured foundation for more in-depth analysis in subsequent stages.
3. Selective Coding	The final phase, selective coding, concentrated on synthesizing the analysis by identifying and consolidating core themes that encapsulated the essence of participants' experiences and perspectives. The research team evaluated the most significant and recurrent themes, refining and integrating categories to capture overarching patterns. This process enabled the formulation of propositions and key insights from the study. Selective coding aimed to distil the complexity of the data into coherent and meaningful findings that align with the study's objectives.

4. Results

MIS are employed in Chinese sports administration due to a combination of strategic, cultural, and technological factors. Extensive interviews were conducted with legislators, business executives, and academics to gain insights into the challenges, opportunities, and future projections associated

with MIS integration. The study reveals nuanced effects of MIS on fan engagement, organizational performance, and player outcomes. By analysing relevant literature and incorporating respondents' perspectives, the research explores the complexities of the Chinese sports management environment. It highlights the opportunities and challenges of MIS

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integration, including novel integration approaches, collaborative efforts, resistance to technology, and financial constraints. These findings offer new perspectives that could shape the future of sports management in China.

4.1. Integration of MIS in Sports Management

In-depth discussions with Chinese experts revealed that the integration of MIS in sports management, while complex, has been transformative (see Table 4). These

conversations highlighted how MIS has fundamentally altered operational dynamics, improved decision-making processes, and promoted innovation within the sports sector. According to most respondents, MIS has positively influenced player performance analysis, organizational processes, and the spectator experience. This underscores the critical role of technology in contemporary sports management, where MIS integration is vital for maintaining relevance and competitiveness.

Table 4: Integration of MIS in Sports Management.

Step	Codes
1. Open Coding	Player Performance, Fan Experience, Decision-Making
2. Axial Coding	Technology Adoption, Organizational Efficiency, Fan Engagement
3. Selective Coding	Data-Driven Decision-Making, Innovation, Competitive Advantage

Respondent 5, a seasoned industry expert, noted, "The incorporation of MIS has fundamentally transformed how we analyse player performance. The ability to collect and evaluate vast amounts of data has opened up new avenues for enhancing training programs." Respondent 7, representing the academic community, observed, "There is a paradigm shift occurring in sports management research, driven by the contributions of MIS. The wealth of available data allows for more sophisticated and evidence-based research." Additionally, Respondent 11, a policymaker, highlighted, "From a policy perspective, the integration of MIS has created a need for updated regulations to ensure the ethical use and protection of sensitive data within the sports sector."

Our findings corroborate previous research on the application of MIS in sports management, highlighting the transformative impact and industry-wide implications of this technology (Shen et al., 2024). Echoing Geremew et al. (2024), the second respondent underscores the crucial role of MIS in enhancing organizational efficacy and decision-making. Dhir et al. (2023) found that data-driven training approaches significantly optimized athlete performance, a finding supported by Respondent 5's emphasis on such techniques. Consistent with established academic understanding, Lv et al. (2022) demonstrate that MIS enables evidence-based research, aligning with Respondent 7's observations on the advancement of sports management research. Furthermore, Respondent 11, a policymaker, raises valid concerns about data governance and ethical issues, reflecting

the dilemmas identified by Aghamohammadi et al. (2022). This convergence of perspectives provides a robust empirical foundation for understanding MIS integration in sports management.

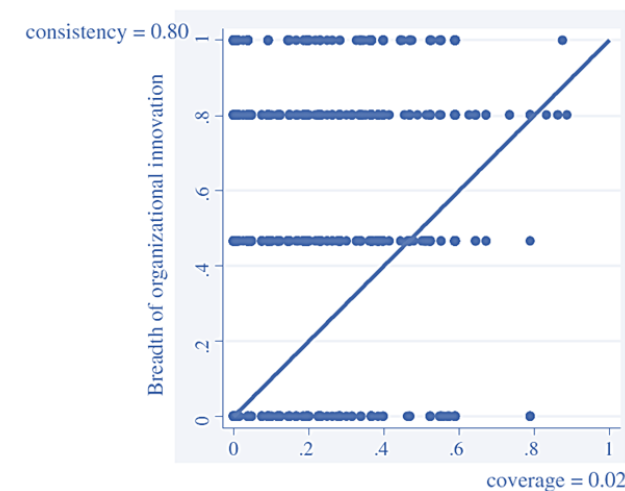


Figure 2: Instance of QCA Findings for Integration of MIS in Sports Management.

The data reveal extensive adoption of MIS within China's sports management sector (see Figure 2). MIS impacts various aspects, including academic research, policy formulation, and player performance analysis. These findings offer significant advancements over previous studies, highlighting the need for continued research and strategic adjustments to optimize MIS utilization in sports management. To remain competitive and innovative in a dynamic industry, organizations must adeptly navigate the complexities associated with MIS integration (see Figure 3).

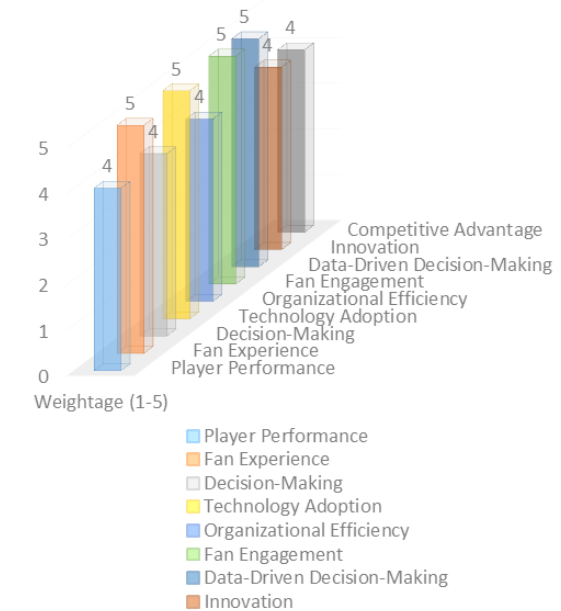


Figure 3: Integration of MIS in Sports Management.

4.2. Challenges in Implementing MIS

The examination of challenges in implementing MIS within Chinese sports management reveals a complex and challenging domain (see Table 5). Experts highlight that organizations face significant scientific, cultural, and business difficulties. The high level of engagement in sports and rapid technological

advancements exacerbate these issues. Experts identify difficulties in aligning MIS objectives with organizational culture, resistance to adopting new technologies, and substantial financial investments as key obstacles. Despite the potential benefits of MIS, inherent conflicts arise as sports organizations attempt to integrate these systems.

Table 5: Challenges in Implementing MIS.

Step	Codes
1. Open Coding	Resistance to Change, Financial Constraints, Organizational Culture
2. Axial Coding	Technology Adoption Hurdles, Financial Implications, Organizational Change
3. Selective Coding	Change Management Strategies, Financial Justification, Cultural Alignment

Academic Expert 3 noted, "It is evident that sports organizations exhibit resistance to change." The integration of MIS often encounters reluctance from staff accustomed to traditional methods. Respondent 9 highlighted that budget constraints frequently prevent organizations from acquiring more advanced MIS technologies. For smaller enterprises, overhauling their MIS can be prohibitively expensive. Policymaker Respondent 12 remarked, "Aligning MIS strategies with existing organizational culture presents a significant challenge." Policymakers in sports organizations must navigate the balance between innovation and traditional practices.

Previous research on integrating technology into sports management and organizational change reflects the challenges experienced by players. A recurring

theme in studies of information system integration is the resistance to change highlighted by Respondent 3 (Scuotto et al., 2023). Respondent 9's observations align with Callens et al.'s (2022) findings that financial constraints impede technology adoption (Su et al., 2020). Experts concur with Respondent 12 that a delicate balance exists between innovation and organizational culture, emphasizing the necessity of cultural alignment for effective change management. This study examines the difficulties encountered by organizations, particularly in the context of Chinese sports management, as they attempt to integrate Management Information Systems. Existing research corroborates that these challenges are prevalent across various sectors. Sports organizations must overcome issues related to cultural misalignment, budget constraints, and resistance to adopting MIS.

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To address these issues effectively, companies require a comprehensive business strategy that integrates technological solutions with robust change management practices. The findings indicate a need for specialized

approaches tailored to the distinctive characteristics of the sports industry. Such methods will facilitate the integration of MIS within the continually evolving sports management environment (see Figure 4).

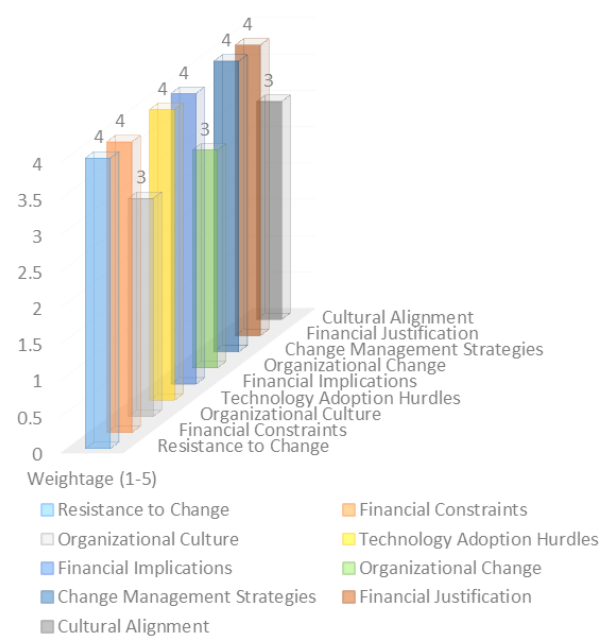


Figure 4: Challenges in Implementing MIS.

4.3. Opportunities and Innovations

Research into the opportunities and benefits of integrating MIS within Chinese sports management has highlighted a readiness for transformation (see Table 6). Respondents identified a range of possibilities, including technology-driven fan engagement and data-driven decision-making. The potential of MIS to enhance performance and foster innovation was met

with optimism. The convergence of MIS with emerging technologies such as virtual reality and artificial intelligence presents transformative opportunities for the sports industry, including advancements in player performance analysis, fan experience, and organizational operations. This discussion explores the interplay of technology, strategic planning, and the evolving needs of the Chinese sports ecosystem.

Table 6: Opportunities and Innovations.

Step	Codes
1. Open Coding	Data-Driven Decision-Making, Revenue Streams, Technological Innovations
2. Axial Coding	AI Integration, Augmented Reality, Economic Growth
3. Selective Coding	Personalized Fan Experiences, Predictive Analytics, Responsible Innovation

Respondent 1, an expert in the field, noted, "The integration of MIS facilitates the creation of personalized fan experiences." The use of augmented reality by sports organizations enhances fan engagement and fosters loyalty through immersive experiences. From an academic perspective, Respondent 6 observed, "The integration of machine learning and artificial intelligence in sports analytics presents significant opportunities." This convergence enhances player performance and provides critical insights for strategic

decision-making in team management. Respondent 10, a policymaker, highlighted, "The innovative deployment of MIS has the potential to drive economic growth within the sports sector." Policymakers can influence regulations to foster a conducive environment for technology-driven advancements, thereby supporting sustainable development.

Previous research has highlighted the significant impact of MIS across various sectors (Bashir et al.,

2023). These findings support the identification of new opportunities and innovations within the field. Mancuso et al. (2023) align with Respondent 1's emphasis on enhancing fan experiences through augmented reality, reflecting the broader impact of technology on consumer engagement in the entertainment industry. Similarly, Selcuk and Cizel

(2024) corroborate Respondent 6's insights on the role of artificial intelligence in optimizing athletic performance through predictive analytics. Moreover, Respondent 10's views on policymaking align with the broader discourse on developing regulatory frameworks that foster technological advancement, as noted by West (20BB).

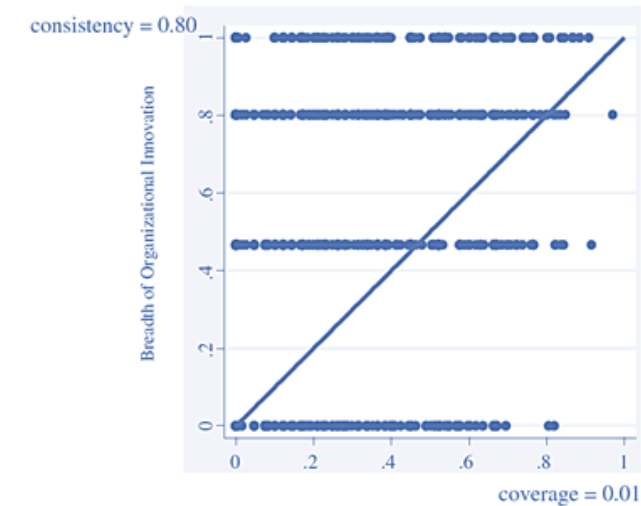


Figure 5: Instance of QCA Findings where Challenges and Opportunities were Avail in Synergizing Business Model Innovation for Sports Management.

In summary, integrating MIS into sports administration in China reveals significant potential for advancement (see Figure 5). This potential extends beyond the sports industry, as supported by existing literature. Organizations that effectively utilize MIS innovations can gain a competitive edge. The findings highlight

the need for stakeholders, policymakers, and sports entities to embrace these technological advancements and foster innovation. By doing so, the Chinese sports sector could lead global developments, enhancing fan experiences, optimizing player performance, and promoting sustainable growth (see Figure 6).

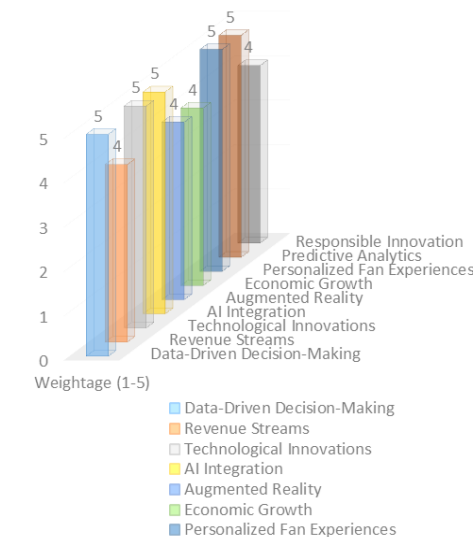


Figure 6: Opportunities and Innovations.

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4.4. Cultural and Contextual Influences

Research into the integration of MIS in Chinese sports management reveals a complex interplay between modern technological demands and traditional cultural norms (see Table 7). Respondents consistently emphasized the importance of aligning MIS strategies with local values to mitigate cultural conflicts. A

thorough analysis of the sports industry, considering its historical context, regulatory framework, and social conventions, is essential due to its significant cultural role in China. The discussions highlight the need for cultural sensitivity in developing effective MIS solutions for the Chinese sports sector, addressing the unique opportunities and challenges posed by these factors.

Table 7: Cultural and Contextual Influences.

Step	Codes
1. Open Coding	Alignment with Traditional Values, Regulatory Landscape, Historical Context
2. Axial Coding	Cultural Nuances, Governmental Policies, Heritage Considerations
3. Selective Coding	Collaborative Technology Adoption, Regulatory Compliance, Tradition-Moderated Modernization

Respondent 4, an academic authority, noted, "Cooperation and harmony are highly valued by Chinese society." Tailoring MIS approaches to promote collaboration and open dialogue would better align with the traditional values intrinsic to China's sports culture. Additionally, Respondent 8 emphasized that governmental policies significantly influence the sports industry. MIS projects should adhere to regulations to ensure effective IT utilization. Respondent 13 emphasizes the significance of integrating China's sports history into MIS strategies to harmonize tradition

with modernity. Nchanji et al. (2024) highlight that the adoption of technology is influenced by societal and contextual factors. Respondent 4 advocates for combining MIS methods with traditional values to facilitate technology adoption. Recent research on legal frameworks and technology use, as discussed by Chávez-Rivera et al. (2024), supports Respondent 8's assertion that government policies impact the sports sector. Furthermore, Grillitsch et al. (2023) corroborate Respondent 13's emphasis on the cultural and historical aspects of sports spectatorship.

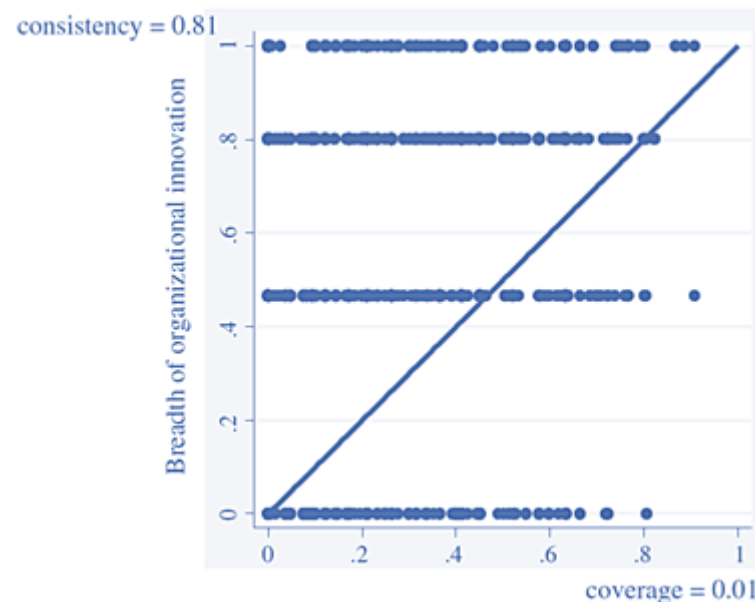


Figure 7: Instance of QCA Findings for Cultural and Contextual Influences in Sports Management.

Cultural and contextual factors significantly influence the application of MIS in Chinese sports management, underscoring the need to balance technological advancements with traditional practices (see Figure 7).

This study's findings indicate that global acceptance of new technologies is affected by cultural considerations. Chinese sports organizations must account for these cultural differences when implementing MIS. The

results suggest that effective MIS strategies in China should integrate modern technology with traditional values. By aligning MIS with cultural and social factors,

organizations can enhance the relevance of technology and increase stakeholder engagement within the dynamic sports industry (see Figure 8).

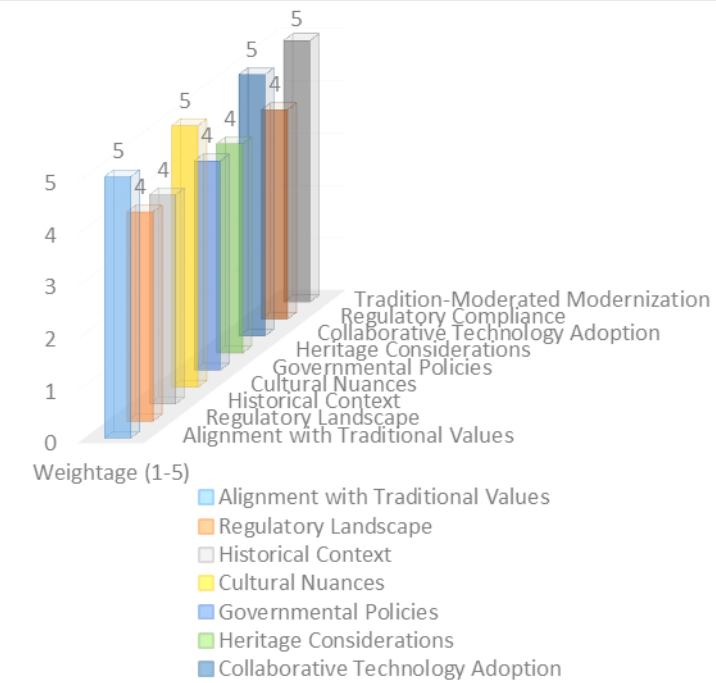


Figure 8: Cultural and Contextual Influences.

4.5. Collaboration and Partnerships

Our research highlights the critical role of alliances and partnerships for achieving business success in the sports industry. Discussions with participants frequently centred on the transformative potential of joint ventures (see Table 8). Collaboration is seen as a key factor in expanding market reach, accelerating technological progress, and improving resource accessibility, whether

through partnerships with other industries, IT firms, or government entities. This underscores the need for fostering effective collaborative relationships to address the challenges of MIS integration across sports organizations, technology providers, and other stakeholders. The dynamics of this topic are continually evolving.

Table 8: Collaboration and Partnerships.

Step	Codes
1. Open Coding	Strategic Alliances, Technology Partnerships, Cross-Industry Collaborations
2. Axial Coding	Resource Optimization, Technological Advancements, Market Expansion
3. Selective Coding	Innovative Solutions, Synergistic Relationships, Responsible Technology Use

Expert Respondent 2 observed, "Sports organizations can leverage advanced technological solutions through strategic alliances with technology firms, thereby avoiding the need to invest in their own technology infrastructure." This approach enhances both efficiency and innovation, creating a mutually beneficial scenario. Scholar Respondent 6 highlighted that "cross-industry collaborations in sports management bring fresh perspectives," fostering innovative ideas and new

solutions to persistent challenges through partnerships with entities outside the sports sector. Policymaker Respondent 11 emphasized the critical role of government partnerships in shaping the regulatory framework for MIS integration. In a collaborative environment between sports organizations and legislators, responsible technological advancement can be effectively achieved. Research underscores the significance of collaboration in advancing

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technology through strategic alliances (Wang et al., 2021). Respondent 2's views on partnering with technology companies align with findings on the role of collaboration in fostering innovation (Grillitsch et al., 2023). Additionally, studies confirm that cross-sector partnerships stimulate innovation, supporting Respondent 6's advocacy for diverse collaboration networks (Mancuso et al., 2023). Consistent with Respondent 11's emphasis on government partnerships, research highlights legislators' critical role in shaping the regulatory landscape for technology adoption (Lefebvre et al., 2024).

administration reveals the significant transformative potential of collaborative efforts and synergistic partnerships. Recent research indicates that collaborative approaches can facilitate the adoption of new technologies and stimulate innovation. It is essential for sports organizations to establish robust alliances with government bodies and IT companies that utilize MIS. The findings underscore the need for increased cooperation among corporate, sports, academic, and legislative leaders to develop ethical frameworks. By integrating expertise and resources, such partnerships can drive innovation and enhance both the sports and industrial environments in China (see Figure 9).

In summary, the examination of MIS in Chinese sports

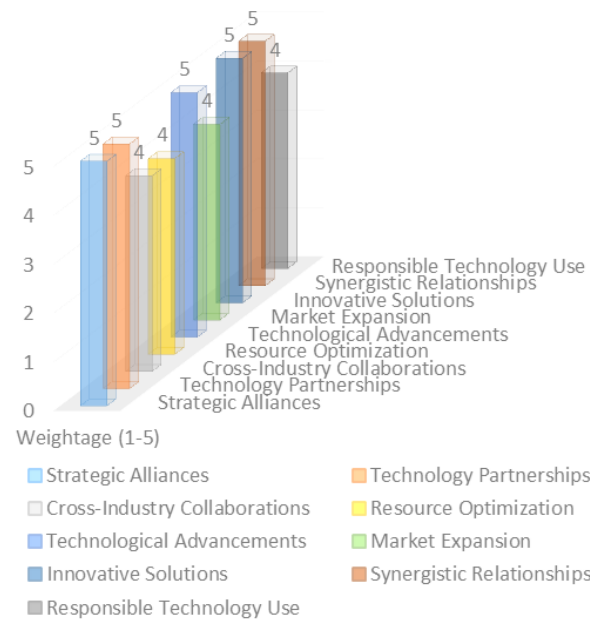


Figure 9: Collaboration and Partnerships.

4.6. Future Trends and Recommendations

A forward-looking analysis of MIS integration in Chinese sports management, driven by industry shifts and technological advancements, has revealed notable trends and future recommendations (see Table 9). Participants anticipate significant developments, including increased utilization of data analytics and artificial intelligence in governance. The discourse highlighted innovative strategies for fan engagement

and the critical need for robust cybersecurity measures. The discussion underscores the importance of staying current with technological advancements and strategic planning in an evolving landscape. Additionally, the research provides recommendations for fostering innovative thinking, investing in workforce education, and establishing industry-wide guidelines to facilitate the seamless integration of MIS within the dynamic sports ecosystem.

Table 9: Future Trends and Recommendations.

Step	Codes
1. Open Coding	Data Analytics Proliferation, AI Influence, Cybersecurity
2. Axial Coding	Predictive Analytics, Decision Support Systems, Robust Cybersecurity Frameworks
3. Selective Coding	Continuous Innovation, Workforce Training, Industry Standards

Respondent 1 highlights that data analytics will define the future of sports administration, offering a competitive edge through enhanced player performance, fan engagement, and strategic decision-making. Academic Respondent 5 predicts that artificial intelligence will significantly transform the sector, making AI adoption essential for decision support and predictive analytics. Government official Respondent 14 underscores the necessity of robust cybersecurity measures, advocating for comprehensive regulations to protect sensitive data

and maintain public trust. Grillitsch et al. (2023) highlight the transformative effects of data analytics and AI on sports administration, aligning with future trends. Respondent 1's focus on data-driven decision-making (Casady, 2024) and Respondent 5's insights on AI for performance and decision support (Sahebalzamani et al., 2023) reflect these advancements. Additionally, Respondent 14's emphasis on cybersecurity aligns with the critical need for robust security measures in technology integration (Kallmuenzer et al., 2021).

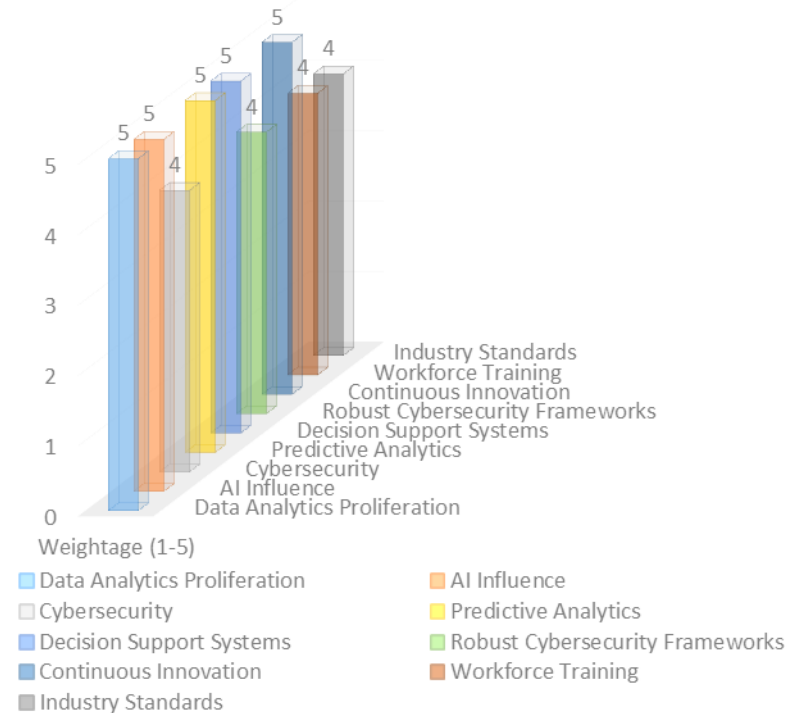


Figure 10: Future Trends and Recommendations.

The investigation into future trends and recommendations for integrating MIS in Chinese sports management highlights a strategic approach to navigating the evolving industry landscape. Drawing from empirical evidence, these insights are relevant across various sectors. To remain competitive, organizations must prioritize data analytics, AI, and cybersecurity (see Figure 10). Research underscores the need for investment in innovative technologies, employee training, and the establishment of industry standards. By embracing these forward-looking strategies, Chinese sports organizations can enhance their global competitiveness through technological innovation.

pathway for technology adoption in the industry and its implications. Existing literature supports the transformative impact of MIS across various sectors. The integration of MIS proves complex, influencing not only player performance analysis but also organizational operations and fan engagement. This intricate dynamic underscores the pivotal role of advanced analytics and technology-driven decision-making, reflecting a global trend towards data-driven strategies. Such integration is crucial for maintaining competitiveness in the modern sports industry, highlighting the importance of leveraging information and technology for enhanced efficiency and innovation (Scuotto et al., 2023). Organizations encounter significant challenges when adopting new technologies, and the difficulties of implementing MIS within China's sports management sector highlight

these issues. Research across various fields identifies common obstacles, including insufficient stakeholder support, limited resources, and the need for cultural alignment (Sohrabi et al., 2023). To balance the industry's traditional values with technological advancements, sports organizations must understand these challenges thoroughly. The study emphasizes the importance of change management frameworks, financial considerations, and cultural alignment initiatives in proactively addressing these issues.

The adoption of MIS in Chinese sports management presents some of the industry's most promising opportunities and innovations. Insights from industry experts, researchers, and policymakers highlight the potential of integrating artificial intelligence, exploring new revenue streams, and enhancing personalized fan experiences. Dhir et al. (2023) emphasize that technology is evolving beyond optimization to become a transformative force in the sports sector. The convergence of MIS and emerging technologies is poised to drive significant innovations, creating an environment where novel ideas are crucial for achieving long-term success. It became evident that cultural and contextual factors are essential in the integration of MIS, underscoring the need for approaches that are attuned to established norms, policies, and practices. Selcuk and Cizel (2024) argue that technology adoption is complex and deeply influenced by cultural contexts. The study emphasizes the importance of responsible innovation that aligns with cultural nuances and regulatory frameworks, as well as the need for collaborative technology adoption in the Chinese sports sector. Balancing efficiency with cultural sensitivity and social responsibility is crucial for successful technology integration, as indicated by the findings.

Key factors for the successful integration of MIS include teamwork and collaboration, reflecting a broader trend where partnerships enhance innovation and efficiency across various sectors. The study highlights that in the sports industry—characterized by its interconnected network of teams, technology providers, and regulators—collaboration can significantly impact outcomes. Strategic alliances with government bodies, cross-industry partners, and IT firms create a synergistic environment where MIS integration becomes a collective effort, shaping the future of sports management in China rather than merely achieving organizational goals. The study also offers a forward-looking perspective on future trends, aligning with the global trajectory of sports technology (Sahebalzamani et al., 2023).

Emphasizing the importance of data analytics, artificial intelligence, and robust cybersecurity, it encourages Chinese sports organizations to proactively adopt these advancements. Recommendations include fostering an innovative culture, investing in employee training, and establishing industry standards. These insights not only contribute to academic discourse on MIS in sports management but also provide practical guidance for professionals, policymakers, and industry stakeholders in China and beyond.

6. Conclusion

In summary, this study provides a foundational understanding of the dynamics surrounding MIS in Chinese sports management. It offers a comprehensive analysis of the challenges and opportunities associated with MIS integration, incorporating financial, cultural, and collaborative dimensions. Consistent with expert viewpoints, the study discusses the transformative potential of MIS, alongside the obstacles and resistance related to technology adoption. It emphasizes the importance of cultural sensitivity, financial acumen, and collaboration in navigating the evolving sports industry. The study delivers valuable theoretical insights and practical guidance for Chinese organizations pursuing MIS integration, bridging the gap between academic theory and real-world application. While acknowledging its limitations, the research identifies areas for future exploration to deepen the understanding of MIS integration across various contexts and stakeholders. This work represents a significant step in elucidating the dynamics of technology adoption in sports management, paving the way for further refinement of strategies that align technological advancements with the unique characteristics of the Chinese sports ecosystem.

6.1. Theoretical and Practical Implications

The integration of MIS in Chinese sports administration has significant theoretical implications, challenging existing assumptions about sports technology utilization. This paper explores the transition issues faced by sports organizations when adopting MIS, highlighting the relevance of technology adoption models such as Rogers' Diffusion of Innovations theory. Rogers' phases—change aversion, financial constraints, and cultural alignment—are crucial for understanding the adoption process. The study underscores the importance of incorporating cultural and contextual factors into theoretical frameworks. Hofstede's cultural dimensions theory is used to elucidate how cultural nuances influence the acceptance of sports technology in China. It suggests

that local values must be integrated into technology adoption strategies to be successful. Additionally, partnership and cooperation theories emphasize the role of strategic collaborations in overcoming MIS integration challenges. The research illustrates how technological companies, government agencies, cross-industry partners, and sports organizations are interconnected through innovation networks and strategic alliances. This theoretical framework enhances the understanding of how collaboration can drive innovation and optimize resources. Overall, the study not only advances theoretical knowledge in sports administration but also has broader implications for the application of collaborative technology across various sectors.

The integration of MIS offers significant advantages to Chinese sports organizations, policymakers, and industry stakeholders. Insights from this study suggest that technology-driven markets can leverage these benefits to drive innovation, improve efficiency, and maintain competitiveness. Effective change management is essential in the sports industry, as organizations must navigate resistance through positive leadership, effective communication, and comprehensive employee training. This highlights the need for organizational cultural transformation beyond merely addressing technological aspects. Financial constraints impact MIS implementation, particularly for smaller organizations struggling with the high costs of a full system overhaul. To address this, sports organizations might explore governance grants or digital enterprise partnerships, emphasizing MIS benefits such as enhanced efficiency, improved audience engagement, and better decision-making to justify funding. A robust financial strategy that includes both initial investments and long-term benefits is crucial for successful MIS adoption. The study also underscores the importance of partnerships and collaboration. Effective implementation of sports administration technology requires cooperation among technology firms, interdepartmental teams, and government agencies. Building a collaborative environment that promotes information sharing, resource efficiency, and joint creativity is vital. Regulators should encourage ethical technological advancements to foster growth. Overall, successful MIS integration demands organizational initiatives and teamwork. Collaborative networks, change management strategies, and innovative financing models are essential for navigating the evolving technological landscape. These practical recommendations offer a framework for Chinese sports organizations, governments, and industry stakeholders

to effectively implement MIS and address identified challenges, ensuring sustained success.

5.2. Limitations and Future Research Directions

While the study provided valuable insights, several limitations warrant consideration. The research primarily focused on Chinese sports organizations, which may restrict the applicability of its findings to other cultural and institutional contexts. To enhance the external validity of the results, comparisons with different regions and cultural settings are necessary. The use of semi-structured interviews, while effective for gathering qualitative data, may introduce participant biases. Respondents might provide socially desirable answers or omit critical issues related to MIS implementation. To obtain a more comprehensive understanding, integrating quantitative methods such as surveys or observational studies with qualitative data is recommended. The study concentrated on sports management and MIS professionals, potentially overlooking the perspectives of end-users such as players, coaches, and fans. Including these stakeholders in future research would provide a more nuanced understanding of how MIS affects various elements of the sports ecosystem. Additionally, the research did not explore cultural influences on collaborative strategies and innovation recognition. Investigating these aspects could offer deeper insights into the challenges of MIS integration. Future research should focus on cross-cultural adoption of MIS to address these limitations and advance the field. Comparative studies across different nations and sports sectors could identify common issues and cultural differences, contributing to the development of universal frameworks. Employing mixed-methods approaches will help mitigate biases and validate findings, while incorporating end-user perspectives will enhance understanding of the full impact of MIS on sports organizations. Examining collaboration success factors and challenges in various partnerships may also provide valuable insights. Addressing these limitations and following the suggested research directions will contribute to the creation of more robust conceptual frameworks and practical guidelines for the effective integration of MIS in the dynamic and complex field of sports administration.

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