The impact of COVID-19 on the sports event

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Abstract: Sports event plays an important role in the development of the sports industry. Taking the basic characteristics of sports events and the current development status as the starting point, the study focused on the threatens and opportunities brought about by the development of COVID-19 to sports events. The study shows that the COVID-19 brings threaten to sports development from the aspects of economic loss, main business, major events, global competition, and event management services. Meanwhile, it also brings opportunities to expand sports market, realize the multi-functional value of sports venues, highlight the role of events in city governance, and change the business mode of sports events. In the face of hazards and opportunities, efforts should be made to improve the management and service level of sports events, give full play to the functions and functions of sports social organizations, scientifically deploy preparations for major events, fully carry out self-rescue by the main body of the event, and strengthen long-term follow-up research on sport events after the epidemic.

Keywords: COVID-19; Sports Events; Event management; Sports industry; Sports venues

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I. Introduction

The onset of the COVID-19 pandemic in late 2019 precipitated a global crisis with far-reaching ramifications across various sectors, including the realm of sports. From the cancellation of international tournaments to the postponement of prestigious events like the Tokyo Olympic Games, the sports industry faced unprecedented challenges necessitating swift adaptation and strategic response measures. The backdrop of the COVID-19 pandemic has engendered a landscape fraught with uncertainties for sports events globally. In China alone, the reverberations of the pandemic were keenly felt across a spectrum of athletic endeavors, ranging from Olympic qualification matches to national-level competitions and mass participation events. The disruption wrought by the pandemic transcended geographical boundaries, leading to the cancellation, postponement, or relocation of numerous sporting fixtures, including marquee events like the World Indoor Track and Field Championships and the Diving World Cup series(Nkang, Okon& Bassey, 2023). The reverberations of these disruptions extended beyond the professional realm, impacting grassroots initiatives and community-based sports programs.

Central to understanding the ramifications of COVID-19 on sports events is an appreciation of the sector's intrinsic interconnectedness with the broader sports industry. Sports events serve as the linchpin of this ecosystem, driving economic activity, fostering societal cohesion, and catalyzing the development of ancillary sectors such as tourism and hospitality. Against this backdrop, the pandemic-induced upheaval posed existential challenges to the established paradigms of event organization, revenue generation, and stakeholder engagement within the sports domain. Moreover, the imperative to balance public health imperatives with the imperatives of sporting excellence underscored the exigency of devising agile and adaptive strategies to mitigate the impact of the crisis.

Drawing insights from extant scholarship on crisis management within the sports domain, it becomes evident that the COVID-19 pandemic represents a watershed moment necessitating a reevaluation of existing frameworks and practices. While previous research, such as Wang's seminal work on the impact of the 2008 international financial crisis on sports development, offers valuable insights into the determinants of resilience and vulnerability within the sector, the unprecedented scale and scope of the current crisis demand novel analytical approaches (Wang & Li, 2020). By synthesizing insights from disciplines such as economics, sociology, and public health, scholars can construct a holistic understanding of the interplay between macro-level policy interventions and micro-level sponsorship dynamics in shaping the trajectory of sports events amidst the pandemic. Furthermore, the parallels between sports events and tourism activities provide a fertile ground for comparative analysis, offering valuable insights into crisis mitigation strategies and recovery trajectories. By leveraging methodologies such as Li's bottom-line approach to assess the impact of crisis events on tourism, researchers can

glean valuable lessons applicable to the sports domain (Li, Li & Zhang, 2003). Similarly, Zhang's utilization of time-series models to evaluate post-crisis recovery dynamics underscores the importance of nuanced, data-driven approaches to crisis management and resilience-building within the sports industry (Zhang, 2011).

In light of the foregoing, this study endeavors to elucidate the multifaceted impact of COVID-19 on sports events, synthesizing insights from diverse disciplinary perspectives to inform evidence-based policy formulation and strategic decision-making. This study undertakes a comprehensive analysis of the multifaceted impact of COVID-19 on sports events, delineating both the hazards and opportunities that have emerged in its wake. By examining existing research paradigms and drawing parallels with analogous crises, this study aims to provide actionable insights and recommendations for navigating the complexities posed by the pandemic and fostering the resilience of the sports industry.

II. Method

This study employed a comprehensive literature review approach to investigate various aspects of sports events, particularly focusing on the impact of the COVID-19 pandemic. A systematic search of academic databases such as PubMed, Google Scholar, and Scopus was conducted to identify relevant peer-reviewed articles, reports, and scholarly publications. The selected literature was critically analyzed to extract key insights into the challenges and opportunities facing the sports event industry amidst the pandemic. Key themes and trends emerging from the literature were identified and synthesized to provide a nuanced understanding of the topic.

Additionally, empirical data, including statistical figures, case studies, and expert opinions, were incorporated to support the arguments and assertions made in the study. Where necessary, theoretical frameworks from relevant disciplines such as event management, public health, and urban governance were utilized to provide a conceptual basis for the analysis.

Furthermore, the study employed a qualitative approach to interpret and contextualize the findings, allowing for in-depth exploration of the complex dynamics underlying sports events. Limitations of the research were acknowledged, and suggestions for future research directions were provided to guide further inquiry into the field.

III. Results

This section delves into the multifaceted crisis posed by COVID-19 on the development of sports events. It encompasses various dimensions of the challenges encountered, including the substantial economic losses resulting from event suspensions, the direct operational impacts on competition organizations, the heightened complexities in preparing for major events, the significant disruptions to the global event industry chain, and the challenges encountered in event management services amidst the pandemic. Each sub-section sheds light on critical aspects of the crisis and underscores the profound implications for the sports event landscape.

3.1 Huge economic losses caused by the suspension of the event

The suspension of sports events worldwide due to the COVID-19 pandemic has precipitated substantial economic losses, stemming from multiple facets of event postponements and cancellations. Primarily, the immense investments in large-scale sports events, exemplified by the Tokyo Olympic Games, have encountered significant hurdles in cost recovery. For instance, the estimated \$12.4 billion expenditure for the 2020 Tokyo Olympics faces prolonged recovery timelines postponement entails, amplifying financial strains on host cities (Allam, 2020). Furthermore, the anticipated economic benefits for Japan, including sponsorship revenues exceeding \$3.1 billion and an envisaged surge in tourism, face jeopardy with the postponement, projecting adverse impacts on the country's economic prospects.

Secondly, the suspension of professional leagues has imposed considerable economic pressures on clubs, disrupting revenue streams derived from ticket sales, concessions, and merchandise. The cessation of league activities disrupts the rhythm of fan engagement and consumption patterns, thereby curtailing income sources for clubs and their affiliated cities. Notably, estimations from Italian media forecast approximately €40 million in economic losses for the Italian League, necessitating interventions such as the implementation of Temporary Employment Regulation Orders (ERTE) to mitigate financial distress among clubs in Spain and other affected regions.

Moreover, the aftermath of the pandemic is anticipated to entail enduring economic repercussions, exemplified by the postponement of events like the European Cup. The intricate logistical arrangements involving international sports organizations and host governments face complexities exacerbated by varying epidemic control measures and policy support across nations (Chakrabarty & Premkumar, 2023). Furthermore, consumer apprehensions regarding close contact environments post-pandemic are projected to dampen ticket sales, concessions, and ancillary revenues for an extended period, prolonging economic downturns even after the resumption of sports events.

3.2 Direct impact of covid-19 on the operation of the competition organization

The operational landscape of competitive performance organizations has been significantly impacted by the COVID-19 pandemic. Shanghai's sports industry statistics reveal a notable increase of 39.68% in the number of entities engaged in competitive performance business from 2015 to 2018, surpassing the average growth of all sports market entities by 27.07% (General Ainistation of sport of China, 2020). However, despite this growth, the business income of market subjects involved in competition and performance activities experienced comparatively lower growth rates, ranking fifth among sports service industry subdivisions in 2017.

The competitive performance industry, characterized by numerous startups and small enterprises, faces inherent challenges such as limited operating experience, singular business models, and constrained financial reserves. Compounded by the industry's generally low profitability, these factors contribute to a vulnerability to risks. The suspension of events raises the specter of contract defaults for organizers, sponsors, and stadiums. The ongoing crisis, marked by employee furloughs and uncertain epidemic resolution timelines, has left some competition organizers at the precipice of bankruptcy.

Post-pandemic, event postponements may lead to a concentrated schedule in the latter half of 2020. For example, Shanghai Jiushi sports Event Company plans to reschedule events like the "World Equestrian Championship" and "F1 China Grand Prix" to October-November, alongside the "ATP1000 Shanghai Masters." However, this clustering of events presents challenges. Firstly, intensified event schedules may divert audience attention, leading to decreased sponsorship and ticket income (Mackellar, 2013). Secondly, the reluctance of foreign sports teams and athletes to participate due to lingering epidemic concerns could diminish the star power crucial for box office appeal. Thirdly, heightened uncertainty may intensify competition for public resources, elevating overall event costs.

In summary, the direct impact of COVID-19 on competitive performance organizations encompasses financial vulnerabilities, contractual risks, and challenges associated with post-pandemic event rescheduling. Effective risk management and strategic planning are imperative for the industry's recovery and sustained viability.

3.3 The increase in variables in preparation for major events

The COVID-19 pandemic has significantly impeded the preparations for major international events hosted by China, including the 2022 Beijing Winter Olympics and the Hangzhou Asian Games. These events serve as crucial platforms for showcasing China's image globally and align with national strategies like the coordinated development of Beijing, Tianjin, and Hebei, and the regional integration development of the Yangtze River Delta. However, pandemic-induced disruptions have resulted in the contraction of the preparation timeframe, particularly impacting the construction schedule of Winter Olympic projects.

Challenges include pressure on construction timelines, cancellation of important test events, shortened venue operation team training periods, and reduced opportunities for the Winter Olympic preparation team due to postponed or canceled domestic ice and snow events. High-level judges of winter events are unable to travel abroad, missing growth opportunities. Construction projects for major sporting events, such as the Chengdu Universiade and the Hangzhou Asian Games, face delays. Though many projects have resumed, they encounter risks like shortened construction periods, insufficient resumption rates, and potential disruptions in the timely delivery of materials.

Moreover, the postponement of global events introduces uncertainty for major events scheduled in China in 2021 and 2022. The potential overlap of the Tokyo Olympic Games with the Universiade and the Fourteenth National Games in the summer of 2021 may impact media exposure, sponsorship value, and event cycles. These changes pose challenges for the 2022 Beijing Winter Olympics and the Hangzhou Asian Games, highlighting the need for strategic adaptation and risk management in navigating the complex landscape of international sports events during and post-pandemic.

3.4 The global event industry chain is greatly affected

The global event industry chain faces profound disruptions due to the COVID-19 pandemic. Economic globalization has driven significant investments by Chinese enterprises in overseas sports, including professional clubs, event copyrights, and sports media companies. However, the suspension of major professional leagues during the pandemic has left platforms holding relay copyrights with no competitions to broadcast, impacting their ability to capitalize on high copyright fees. Companies like Rhine Sports, Contemporary Mingcheng, Suning Sports, Tencent Sports, Wanda Group, Heli Wansheng, and China Europe Sports, which heavily invested in overseas sports, have experienced challenges with reduced share prices and potential slowdowns in the sports event copyright trading market.

Event sponsorship, a vital revenue source, has also been severely affected. Chinese enterprises spent \$835 million on advertising during the 2018 World Cup, ranking first globally in sponsorship amounts (Wang et al., 2023). However, the pandemic has led to postponed or canceled events, hindering sponsor returns and

deterring foreign enterprises from investing in the international event sponsorship market. The overall impact extends across event copyright purchasers, media and marketing companies, ticketing platforms, derivatives sales platforms, and event IP development platforms. This unprecedented disruption may even lead to a rupture in the global event industry chain.

3.5 Challenges brought by covid-19d event management services

The ability of the sports department to provide targeted services to event stakeholders and to implement effective post-epidemic event supervision is crucial for the swift recovery of the competition performance industry. Currently, the service mechanism exhibits weaknesses in several key areas. Firstly, there is a notable absence of an efficient sports event information management system. Timely acquisition of information regarding post-epidemic events is essential for the sports department to identify potential risks and intervene in the conduct of events, safeguarding the legitimate rights and interests of stakeholders, including spectators and participants (Asante Antwi et al., 2021). An examination of sports department websites across provinces, municipalities, and autonomous regions revealed that only Beijing possesses a dedicated competition supervision network system. During the 2019 legislative meeting of the national sports policy and regulation department, many regional sports departments highlighted significant information asymmetry with event stakeholders, particularly concerning commercial mass events. Often, knowledge of such events only surfaces through complaints or exposés after their

Secondly, there is a deficiency in competition supervision. Existing sports administrative law enforcement cases primarily rely on administrative penalties and compulsory supervision, overlooking flexible supervision methods. Moreover, the application of emerging regulatory tools such as blacklists and credit regulation remains underdeveloped. Given the heightened operational pressure on event stakeholders postepidemic, an overreliance on stringent regulatory measures may hinder the recovery of the competition performance industry.

Thirdly, services provided to key stakeholders, notably the main participants, lack accuracy. Although Beijing, Shanghai, Jiangsu, and other regions have outlined convenient services for athletes in policy documents post-outbreak, overall service support from sports departments remains inadequate. After the epidemic, various departments like public security, transportation, and health will regulate public resources, potentially subjecting event stakeholders to intricate approval procedures. It is imperative for the sports department to collaborate with relevant entities and establish a comprehensive one-stop sports event service mechanism to address these challenges effectively. This collaborative approach becomes particularly critical for facilitating the recovery of the competition performance industry.

IV. Discussion

- 4.1 Opportunities brought by covid-19 to the development of sports events
- 4.1.1 Sports event market has broad development space

The Chinese competitive performance industry, a leader in the sports sector, has exhibited significant growth, with added value soaring from 5.26 billion yuan in 2015 to 10.3 billion yuan in 2018, boasting a compound growth rate of 25.11%. The COVID-19 pandemic has accentuated the industry's sensitivity due to the inherent timeliness of sports events and their reliance on various supporting sectors. Despite uncertainties and risks, post-epidemic, the sports event market offers substantial development prospects. Existing sports consumption data reveals a 24.7% participation rate in 2018, spanning diverse sports. Suppressed during the epidemic, the desire to engage in sports events is anticipated to surge post-pandemic, fostering industry recovery. Moreover, the global epidemic has positioned China as a potential hub for international events, with organizers expressing renewed confidence in domestic hosting capabilities. Leveraging this opportunity, organizers can strengthen ties with international sports entities, facilitating the hosting of influential events and alleviating post-epidemic operational pressures.

4.1.2 Re-recognize the multi-functional value of sports venues

Public sports venues, pivotal for hosting events, significantly contributed to epidemic control by transforming into Chengfang Cabin Hospitals in Wuhan, alleviating healthcare shortages. Globally, stadiums are recognized for their role in urban development, economic growth, and management enhancements. Post-pandemic, their emergency response functions will be further explored. Additionally, public sports venues are crucial for national fitness, yet China's per capita sports area falls short of developed nations. To address this, constructing sports centers in cities above the county level is imperative, with funding shared across channels. Post-epidemic, seeking support from the State Council and National Development and Reform Commission for including public sports facilities in major infrastructure projects is vital. This includes district and county-level sports centers, urban and rural community sports centers, and outdoor facilities. Such initiatives will not only address fitness challenges but also provide essential space support for future event industry development.

4.1.3 Highlight the unique role of sports events in urban governance

Sports events play a significant role in enhancing urban governance by fostering multi-departmental cooperation and testing the city's response to public emergencies. Hosting large-scale events necessitates coordination among various government departments, providing effective training for managing emergencies like logistics, traffic control, and security. The scale of the event directly correlates with the challenge faced by urban governance. For instance, during the 2019 Wuhan Military Games preparation, the city elevated its governance standards by integrating event-related improvements into district evaluations, issuing comprehensive policy documents, and conducting emergency drills involving multiple departments. Post-event, the city reviewed its experiences to enhance governance, thereby improving its capacity and functionality. The Military Games notably enhanced Wuhan's urban governance, contributing positively to its management and subsequent success in combating the COVID-19 epidemic.

4.1.4 Optimize the operating mode of sports events

Optimizing the operational model of sports events in China's developing competitive performance industry is crucial. Digital event development is essential, and experiences from developed countries highlight its impact on event investment, sponsorship, and product sales (Hudson, 2017). Despite challenges, the surge in online viewership, exemplified by a 151.4% YoY increase in PP Sports' Spring Festival viewership, indicates a significant demand for digital event products, offering substantial growth potential. Seizing this opportunity involves enriching online product offerings, enhancing the viewing experience, and exploring new monetization models

Peripheral derivative development, exemplified by the Nanjing Marathon, demands attention to the sports event IP value chain to create a comprehensive and diverse product system. Collaborating with tourism, catering, and accommodation industries can yield differentiated event services post-epidemic.

The pandemic-driven shift to online platforms for events like e-sports and chess hasn't significantly impacted revenue, benefiting from increased attention and participation during the epidemic. Traditional events should explore opportunities in the "Internet + sports" model and brand building for further development.

4.2 Strategies for the development of sports event industry under the epidemic

4.2.1 Strengthen risk management and enhance crisis response capabilities

The government must enhance risk management to address the challenges posed by the current epidemic and potential secondary risks in sports events. In Shanghai, various government departments should initiate proactive measures: Firstly, establish a dedicated event leadership team to respond promptly to evolving epidemic situations. This includes managing the prevention and control of foreign athletes participating in international events and mitigating epidemic risks associated with mass gatherings. Secondly, implement a comprehensive risk assessment system for events. Conduct qualification and operational capability assessments for sports event organizations to ensure the quality and quantity of events under the epidemic conditions. Thirdly, focus on identifying capital risks, ensuring efficient fund utilization, and preventing misuse of policy benefits by companies. Establishing a third-party event fund supervision platform is recommended to monitor government and enterprise funds, minimizing potential financial risks. Furthermore, innovate athlete training methods to counteract the risk of physical skill decline due to restricted participation in intensive training during the epidemic. Innovative training approaches are essential for meeting the dual objectives of epidemic prevention and athlete skill development. Finally, foster regional cooperation within the Yangtze River Delta to collectively address risks. As Shanghai faces challenges related to the postponement of major events, collaboration with neighboring regions can optimize resource allocation, mitigate risks associated with event overlap, and contribute to the strategic goals of establishing Shanghai as a renowned sports event city. Regional integration within the Yangtze River Delta offers a potential model for efficient risk reduction.

4.2.2 Enhancing Online and Offline Integration for Diversified Operations:

To mitigate risks and reshape operational models, sports event enterprises should bolster their online event systems, fostering excitement and diversifying operations. Amid offline event stagnation, cultivating consumer markets through online events is imperative to expand potential consumer bases and prepare for post-epidemic industrial development. Online events encompass two primary categories: Firstly, e-sports, leveraging information technology to create immersive environments. China's e-sports user base has steadily grown, reaching 428 million in 2018 (Esen, 2019). Shanghai aims to establish itself as the "World E-sports Capital" within 3 to 5 years, offering opportunities for companies to leverage industry resources and tap into e-sports traffic.

Secondly, offline-online "cloud competitions" are gaining traction. Recently tested by the national shooting team, these competitions transcend geographical limitations, offering flexibility but requiring robust integration of sports and technology. While network-related challenges exist, particularly in ensuring game

fairness, cloud competitions, especially in mass fitness events, offer higher entertainment value, lower supervision requirements, and convenient implementation, potentially becoming a new event format.

4.2.3 Reconstruction of the competition system, the community plays an important role:

During the COVID-19 epidemic, Shanghai demonstrated effective epidemic control through efficient urban governance, showcasing the city's modern governance model. At the grassroots level, Shanghai's community management system exhibited comprehensiveness and coordination, providing a strong organizational structure for sports events to engage with communities. Amidst the epidemic's constraints on international sports event resources, there is an opportune moment to revamp Shanghai's event system, focusing on two key areas: firstly, nurturing local sports talent; and secondly, promoting community-based events aligned with the National Fitness Program.

4.2.4 Accumulating strength, from "import" to "go out"

Shanghai has achieved notable success in hosting international "imported" events such as the F1 China Grand Prix, ATP1000 Tennis Masters, IAAF Diamond League (Shanghai Station), World Equestrian Championship, and Shanghai International Marathon. Through this process, Shanghai has accumulated significant expertise. Moving forward, the focus will shift from quantity to quality in event introductions. The selection and types of events will undergo comprehensive evaluation to ensure alignment with Shanghai's urban development objectives. The compatibility between events and Shanghai city will be a critical consideration in the upcoming phase. The COVID-19 pandemic, while pausing international competitions, presents an opportunity to redirect efforts towards outbound initiatives. "Going out" entails not only exporting IP events but also event operation and management services internationally. Cultivating event enterprises with transnational operational capabilities is essential for the sustainable development of Shanghai's sports event industry.

V.Limitations and Future Research Directions

While the study has shed light on various aspects of sports events, there are several limitations to consider. Firstly, the focus primarily remains on the implications of the COVID-19 pandemic on sports events, potentially overlooking other factors influencing the industry's dynamics. Additionally, the research predominantly centers on the Chinese context, limiting its generalizability to other regions.

Future research should aim to address these limitations by exploring a broader range of factors impacting sports events beyond the pandemic, such as technological advancements, socio-cultural influences, and economic shifts. Furthermore, comparative studies across different geographical regions could provide valuable insights into the global landscape of sports event management. Moreover, delving deeper into specific aspects, such as the impact of digitalization on event operations or the effectiveness of risk management strategies, could enhance our understanding of the industry's complexities. Additionally, longitudinal studies tracking the long-term effects of the pandemic on sports event management and consumer behavior would provide valuable insights for industry stakeholders.

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