

The e-sports industry chain in the Yangtze River Economic Belt and its future trend - centred on the Yangtze River Delta region

Zihan Xu

School of International Business, Southwestern University of Finance and Economics, Chengdu, Sichuan, 611130, China

ABSTRACT

The rapid growth of China's e-sports sector has attracted numerous users and opened doors for economic expansion, urban image development, and cultural spread. This research aims to examine the actual condition of the e-sports sector within the Yangtze River Economic Belt, particularly in the Yangtze River Delta area, which has rapidly evolved into a pivotal area for e-sports industry growth in China, owing to its outstanding scientific and technological backing, robust economic base, and an ever-vibrant market climate. Concurrently, it has given rise to various issues, including a scarcity of skilled individuals, a lack of innovation skills, and flawed market governance. Addressing these issues, the research proposes various strategies and recommendations, including nurturing and bringing in skilled individuals, promoting the innovation of technological devices, improving market conditions, and bolstering global maritime collaboration, among others.

KEYWORDS

Chain of e-sports industry; Burgeoning economic sectors; Digital economic landscape; Worldwide development of e-sports industry

1 Introduction

As the digital economy ascends, the e-sports sector has become a swiftly expanding worldwide industry, garnering considerable focus for its societal and economic effects. E-sports, originating as a competitive endeavor from video games, has transformed from a specialized pastime to an internationally acknowledged sport, exemplified by cities such as Katowice in Poland, which are leading the way in e-sports evolution. Boasting more than 600 million e-sports enthusiasts, China plays a pivotal role in this sector, particularly in the Yangtze River Delta area, home to an extensive e-sports network focused around Shanghai. The objective of this research is to examine the present condition of the e-sports industry network in the Yangtze River Delta area, pinpoint obstacles, and suggest approaches for its sustainable growth.

2 Research overview

The genesis of video games and e-sports can be traced back to Europe, the United States, Japan, Korea, among other nations. Initially, there was a lack of distinct separation between them, leading to the belief that e-sports evolved from arcade versions (Lee et al., 2011). As science, technology, and the Internet evolved, eSports transitioned into a professional sphere. By 2013, the international eSports sector evolved, leading to the regular airing of this outstanding competitive sport in various countries via regional networks and broadcasters. This growth, fueled by numerous corporate sponsors and professional gaming clubs across multimedia platforms, significantly propelled the expansion of the gaming and sports industry (Aoyama et al. 2013).

From 2006 to 2018, the Yangtze River Delta's e-sports sector underwent a tripartite phase of inception, swift evolution, and rapid expansion (Zhan Shaowen et al., 2021), transitioning into a phase of solidifying internalization and progressively expanding internationally post-2018. Situated at the heart of the Yangtze River Delta area, Shanghai is a hub for numerous e-sports development firms, midstream tournament entities, clubs, and peripheral downstream businesses. Xinhua Publishing Group, a key player in Shanghai's e-sports sector, is diligently engaged in e-sports education, nurturing associated skills, ongoing analysis of e-sports big data, and collaboration in e-sports new media distribution and related activities (Chen Jun, 2019). By 2019, the A-share market already featured 16 companies, representing 20% of the country's total; 25 emerging three board game companies, making up 22% of the nation's total; and 80% of Shanghai's e-sports businesses, clubs, and athletes, representing the national aggregate (Liu Xinjing, 2019), indicating that studying the local e-sports industry network via the Yangtze River Delta region is both representative and representative. According to the eSports Industry Analysis Report of China, the eSports sector is anticipated to emerge as a key element in the Yangtze River Delta's cohesive strategic growth, with Shanghai poised to be a key player in its evolution. Furthermore, the Report highlights that upcoming e-sports events are likely to focus on sports, be commercialized, form alliances, and take place at home, integrate e-sports more deeply into the broader entertainment landscape, and potentially lead to new mobile e-sports developments. The emergence of the e-sports sector results from the amalgamation of the information and sports industries, encompassing a vast array of sectors like the cultural, scientific, and technological industries. (Yang Qian et al.,

2007). This research aims to penetrate the Yangtze River Delta's e-sports sector by enhancing government funding and oversight, nurturing top-notch e-sports skills, expanding and elevating e-sports events, and merging industrial networks, utilizing literary techniques, comparative analysis methods, logical reasoning approaches, and case study methodologies. Exploring the e-sports sector in the Yangtze River Delta.

3 Present State of the Electronic Sports Industry Network in the Yangtze River Delta Area and Its Academic Importance

Up to the initial six months of 2024, China's e-sports user base stood at approximately 490 million, marking a 0.52% annual growth, essentially sustaining a steady pattern. Nonetheless, several cities in the Yangtze River Delta area, including Hangzhou and Nanjing, are proactively implementing policies supporting e-sports. Particularly driven by unique policies, the Nanjing Jiangning Development Zone has launched numerous new e-sports industry resources, established strong connections with universities and businesses, and laid the groundwork for the local e-sports sector. Comprising the e-sports industry cluster are three key components: the e-sports showroom, tournament centre, and industrial office. The tournament centre stands out as an all-encompassing e-sports hub, amalgamating the diverse roles of e-sports training, launching new products, and hosting tournaments, among others. This outlines the defining structure of the e-sports industry in the Yangtze River Delta area. Furthermore, the Nanjing Jiangning Development Zone has finalized 16 e-sports initiatives, encompassing the creation of e-sports content and the management of platforms, spanning the entire spectrum of the e-sports industry. Following the triumph of the Hangzhou Asian Games, the Yangtze River Delta area has hastened the development of the e-sports sector, establishing China's inaugural professional e-sports arena meeting the Asian Games criteria. This development has facilitated the amalgamation of e-sports facilities with various tournaments and industries.

The Yangtze River Delta area has emerged as a key player in the worldwide e-sports market, thanks to its dedication to policy backing, tournament management, and enhancement of industry chains. The significance of research in the e-sports sector within the Yangtze River Delta area primarily manifests in these dimensions:

3.1 Urban growth and the e-sports sector

Urban development has been significantly propelled by the gaming sector. Numerous urban areas have boosted their appeal and sway through the organization of extensive e-sports gatherings. Shanghai, renowned as the hub of China's e-sports sector, has been a hub for numerous global events, drawing a substantial influx of tourists and investments. These occurrences serve a dual purpose: they bolster the local economic growth and amplify the city's cultural soft power. Concurrently, organizing e-sports events opens doors for the expansion of associated industrial networks, fostering growth in sectors like tourism, catering, and transportation. The advancement of the e-sports sector can foster the broader development of the regional economic landscape. The development strategy for Nantong's e-sports sector holds immense strategic value, anticipated to bring in additional premier e-sports resources and lay a robust groundwork for the industry's growth across the region.

Cities' e-sports sectors in the Yangtze River Delta area synergize, depend on one another, and progressively create a system for merging the e-sports industry, encompassing both you and you, aiding in the dual advancement of the region's economy and culture. An examination of the e-sports industry network reveals that its primary sector comprises e-sports games, competitions, and related industries, all of which mutually enhance and collectively foster economic growth. Statistical data reveals that in 2023, China's gaming industry saw its actual sales surpass 300 billion yuan, marking a 13.95% annual growth. This demonstrates not just the vast market prospects of the e-sports sector, but also highlights its contribution to economic expansion.

3.2 The e-sports sector plays a role in the spread and exchange of culture

Far from being a novel sports sector, the gaming industry plays a crucial role in spreading culture. Events in gaming unite global players and viewers, fostering cultural exchanges and interactions. Gaming serves as more than just a stage for rivalry; it also acts as a stage for cultural interchange. Principal eSports hubs in the Yangtze River Delta, including Shanghai and Hangzhou, have capitalized on the Asian Games eSports event to enhance public knowledge and comprehension of eSports, and to foster the global and superior growth of the Sports sector. Through the realm of eSports, the remarkable traditional culture of China has the potential to soar into the ocean. Modern youth have embraced eSports as a lifestyle, deeply intertwined with their everyday activities like entertainment, social interaction, and consumption, enabling them to delve deeper into various cultures and cultivate an international viewpoint.

3.3 Assistance and direction in e-sports policymaking

Supporting policies is crucial for fostering the positive growth of the e-sports sector. The e-sports industry will benefit from a conducive external atmosphere, thanks to governmental backing through financial aid, taxes, and the building of industrial parks. Concurrently, it's crucial to develop policies that reflect the industry's present progress and upcoming developments, aiming to foster growth in the e-sports sector within a controlled and structured setting. Suzhou City, for instance, has released a directive to encourage the e-sports industry's robust growth, focusing on establishing a brand for e-sports events, nurturing and integrating market participants, and creating a system for training talent. Such strategies offer a conducive policy setting and monetary backing for the growth of the e-sports sector. This indicates robust policy backing for the advancement of the e-sports sector in the Yangtze River Delta area.

3.4 The e-sports sector holds the promise for enduring growth

The eSports sector offers not just immediate financial advantages but also holds untapped potential for sustainable growth. Exploring the e-sports sector in the Yangtze River Delta area reveals its benefits in nurturing talent, advancing technology, and enhancing industry standards. In recent times, the e-sports industry network has evolved, exhibiting significant specialization and sophistication in every segment, encompassing game content creators, tournament planners, content creators, content spreaders, and additional connections. The study also concentrates on the e-sports industry's innovation, R&D efforts. The nation requires an increase in its own e-sports game offerings to boost the industry's fundamental competitive edge by innovating and developing new technologies and products, aiming to foster the industry's sustainable growth.

4 Future Prospects of the E-Sports Industry Chain in the Yangtze River Delta Region

4.1 Growth in Market Size and User Size

CRRP Industry Research Institute's study indicates a consistent growth in both the market size and the user base of China's eSports sector in recent years, with projections of further expansion in the near future. By 2024, it's anticipated that China's eSports market will grow, potentially surpassing a user base of 500 million for the first time. The expansion primarily stems from shifts in the patterns of entertainment consumption and the slow assimilation of esports into conventional culture.

The Yangtze River Delta (YRD), renowned as one of China's most economically advanced areas, characterized by its high population density, swift economic growth, and notable cultural industry benefits, is poised to be a pivotal player in this development.

4.2 Advancements in technology aimed at fostering industrial progress

Innovations in technology, notably the integration of advanced technologies like artificial intelligence and 5G, are set to be the primary motivators for the growth of the e-sports sector. Integrating AI into gaming, including smart matchmaking, virtual reality, and tailored suggestions, has progressively transformed the conventional gameplay and experience. The advent of 5G technology has significantly improved game smoothness and interactivity, reducing player response times and rendering the online multiplayer gaming experience more efficient and lifelike. In the Yangtze River Delta area, robust research and development, along with application skills, have attracted numerous tech and creative companies.

Leveraging these advancements, the eSports sector anticipates a major overhaul of its industrial framework, particularly through novel approaches in tournament management, player engagement, and content creation, significantly contributing to its flourishing growth.

4.3 The Rise of Fresh Enterprises

With the ongoing growth of the gaming sector, novel business models are surfacing. As an illustration, emerging commercial entities like gaming towns, cultural and creative gaming goods, educational aspects of gaming, and gaming tourism are slowly taking shape and extensively utilized in the Yangtze River Delta area. Gaming towns, a unique hub uniting the gaming industry chain, merge aspects of the gaming sector, tourism, entertainment, and culture, offering a more engaging experience for gamers and fostering growth prospects in associated fields. The Yangtze River Delta area, renowned for its abundant cultural assets, tourist spots, and ideal infrastructure, is evolving into a hub for emerging e-sports industry enterprises.

4.4 Integrating across borders to broaden market reach

Integrating the e-sports sector internationally with various other industries has emerged as a key direction for the e-sports industry chain's future growth in the Yangtze River Delta area. The Yangtze River Delta region's robust base in various sectors, including tourism, culture, and education, opens numerous avenues for integrating the e-sports industry across borders. Consider, for instance, merging eSports with tourism to forge novel avenues like eSports theme parks and tourism; merging eSports with the cultural sector to enhance worldwide spread and thorough exploration of eSports culture; and merging eSports with education to develop eSports expertise through eSports education and professional courses. Integrating across borders not only broadens the e-sports sector's market scope but also fosters the collaborative growth of allied industries, injecting fresh energy into the entire industrial network.

4.5 Support for National Policies

As China's e-sports sector slowly gains prominence, the government's focus on this industry has intensified. The Fourteenth Five-Year Plan for the Development of Cultural Industries officially recognizes e-sports as a key component of the cultural sector, reflecting the state's optimistic stance on the e-sports industry's growth. The Yangtze River Delta, a crucial area for policy backing, is set to receive governmental assistance in funding, taxation, and the building of venues. Such policy aids will expedite the e-sports sector's achievement of resource amalgamation and industrial consolidation, and foster the growth of e-sports businesses in nurturing talent, technological advancements, and market enlargement, thereby initiating a period of rapid growth. Leveraging these strategies, the e-sports sector in the Yangtze River Delta will gradually ascend to the forefront of both national and international e-sports circles.

5 Innovation strengthens the e-sports sector in the Yangtze River Delta

Amidst the flourishing eSports sector, creativity has emerged as a key driver of its continuous expansion and competitive edge. The eSports sector in China's Yangtze River Delta (YRD), known for its economic dynamism, exhibits distinct innovative benefits and opportunities. Following numerous research efforts, it's evident that the e-sports sector in the Yangtze River Delta area possesses distinct growth benefits, including market prospects, nurturing talent, trends in internationalization, and entrepreneurial ventures. These aspects are poised to evolve into the future trajectory of the e-sports industry network in the Yangtze River Delta area, with its innovative developments demonstrated as follows:

5.1 Potential in the Market

Initially, the Yangtze River Delta area boasts a substantial group of e-sports enthusiasts, with its youthful consumer base laying a solid groundwork for the varied growth of the e-sports sector. Pertinent statistics indicate a yearly rise in e-sports enthusiasts in the Yangtze River Delta area, establishing it as a major e-sports marketplace in the nation. Additionally, the varied requirements of users have boosted the e-sports industry's market prospects, given that their interest in e-sports extends beyond just one gaming experience to encompass more diverse cultural and entertainment forms. As an illustration, numerous gamers are confined to the game's competitive excitement and also aspire to engage in associated offline pursuits to mingle with additional game hitchhikers. Consequently, the evolution of the e-sports sector ought to adapt to evolving user requirements and delve into a variety of products and services. The evolution of contemporary communication tech and the rising trend of cloud gaming are set to introduce a novel venue for expansion in the e-sports sector. Innovations in science and technology within the Yangtze River Delta region empower e-sports companies to swiftly adjust to market shifts and create innovative products catering to user demands, thereby boosting the e-sports industry's market competitiveness.

5.2 Cultivating Talent

Primarily, the collaboration between academic institutions and the industry stands out. Educational institutions in the Yangtze River Delta area have been vigorously involved in nurturing e-sports experts, thereby advancing the evolution and enhancement of e-sports education. Numerous higher education institutions have formed strong collaborative ties with e-sports companies, providing pertinent courses and hands-on training to boost students' practical skills and job market competitiveness. Furthermore, e-sports majors' syllabus encompasses game design, tournament management, marketing, legal and regulatory aspects, among other areas. The goal of this varied educational program is to develop diverse e-sports skills and broaden job prospects in the e-sports sector, catering to the swiftly evolving demands of the e-sports industry.

5.3 Trend of Globalization

As the worldwide e-sports market thrives, companies in the Yangtze River Delta have broadened their reach internationally, boosting their global presence through involvement in international competitions and bolstering collaborations with overseas businesses. Regarding the current year's progress in e-sports, the Fearless Compact Division team of Shanghai's EDG e-sports club clinched the Championship, significantly boosting the global impact of Chinese e-sports. In the Yangtze River Delta area, e-sports companies have formed significant partnerships with exceptional international teams and entities, facilitating not just technology exchange and experience sharing, but also the blending and dissemination of diverse cultures. From a global viewpoint, e-sports companies in the Yangtze River Delta gain a deeper insight into worldwide market needs, enabling them to formulate more efficient market tactics.

5.4 Exploration of Business

In the Yangtze River Delta area, the e-sports sector is continually venturing into novel business avenues, leading to the development of numerous new business models. As an illustration, certain companies attempt to merge e-sports with tourism, entertainment, and various other sectors to introduce new products and services. Such international collaboration not only augments the industrial network but also improves the overall user experience. Lately, there's been a growth in the magnitude of e-sports events, with the event economy increasingly playing a significant role in the e-sports sector. The Yangtze River Delta region's e-sports events have lured numerous spectators and sponsors, yielding significant economic gains. This trend has spurred companies to focus more on organizing and managing tournaments and to investigate varied profit strategies. The integration of social media into the e-sports sector is increasingly becoming prevalent. Utilizing live streaming services, brief video clips, and various other mediums, e-sports companies can rapidly connect with their intended audience and amplify their brand impact. Furthermore, social media offers users easier avenues for interaction, thereby boosting their engagement and loyalty.

5.5 Innovation in Technology

This document has previously highlighted the prominence of technological advancements within the e-sports sector in the Yangtze River Delta area, illustrating the influence of such developments on the industry. Initially, the primary catalyst for advancing the e-sports sector is the advancement of contemporary technology. Numerous advanced technology firms and research and development bodies in the Yangtze River Delta area offer robust technical assistance to the e-sports sector. As an illustration, the advent of technological tools like artificial intelligence, virtual reality, and big data is transforming how conventional e-sports functions. Furthermore, by thoroughly analyzing user data, e-sports firms gain a deeper insight into user habits and choices, enabling the creation of tailored products and services. Adopting a decision-making strategy based on data not only elevates the user experience but also bolsters the competitive edge of businesses. Thirdly, with the ongoing progression of technology, the e-sports sector is poised to encounter increased chances for technological advancements going forward. Businesses in the Yangtze River Delta ought to proactively adopt innovative technologies and foster the smart, digital evolution of the sector to align with the swiftly shifting market landscape.

6 Conclusion

The research methodically examines the present state, obstacles, and prospective directions of the e-sports sector in the Yangtze River Economic Belt, with a particular focus on the Yangtze River Delta area, uncovering its developmental prospects and major concerns as the central zone of China's e-sports industry. Findings from the research indicate that the Yangtze River Delta area, renowned for its advanced scientific and technological innovation, robust economic base, and vibrant market conditions, has established a comprehensive e-sports industry network, placing it at the forefront nationally in tournament management, user base, and policy backing. Not only has the gaming sector spurred regional economic expansion, but it has also bolstered the cities' reputation and global impact by hosting major tournaments and fostering intercultural dialogue.

Nonetheless, the existing industry network continues to grapple with significant issues, including a lack of skilled professionals, inadequate capacity for innovation, and flawed market control. This document, targeting these issues, suggests enhancing collaboration among the industrial sector, academic circles, and research institutions to develop multifaceted skills, fostering autonomous R&D in key technologies, refining market entry and regulatory frameworks, and intensifying global interactions, cooperation, and various other strategies to advance industrial growth and sustainable progress. The research's novelty stems from integrating literature review, case studies, and logical analysis techniques, methodically deciphering the combined impact of the e-sports sector, and suggesting an all-encompassing approach

encompassing policy, technology, expertise, and market, offering a range of theoretical citations for local authorities and businesses to develop development tactics.

The constraints of this study primarily manifest in the limited promptness of the research findings, the unconfirmed practical impacts of certain policy measures, and the need for more investigation into the applicability of regional scenarios. Expanding future studies to different economic regions or global comparisons in the e-sports sector could help monitor policy impacts and investigate how new technologies (like meta-univers, AI-created content) are reshaping the e-sports industry network. Furthermore, delving into the equilibrium between the commercial aspects and the societal significance of e-sports culture merits thorough examination. In essence, for the e-sports sector to prosper, it necessitates collaborative efforts among multiple parties and ongoing innovation to realize a mutually beneficial scenario, focusing on economic productivity and cultural significance in worldwide contests.

References

- [1] Lee D., & Schoenstedt L. J. (2011). Comparison of E-Sports and Traditional Sports Consumption Motives. *iCHPER-SD Journal of Research*.
- [2] Aoyama Y., & Izushi H. (2013). Innovation, Industry Evolution and Cross-sectoral Skill Transfer in the Video Game Industry: a Three-Country Study. in *Handbook of Industry Studies and Economic Geography* (pp. xx-xx). London: Edward Elgar Publishing.
- [3] Jason G., Maria J., Minerva W., & Je Seok L. (2020). Esports Research: a Literature Review. *games and Culture*.
- [4] Hu P. L.. (2022). Data Yao Industry Chain and Development Path of China's Esports Industry. *Humanities World*.
- [5] Hu, Penglin. (2024). Guangdong, Hong Kong and Macao Greater Bay Area e-sports industry chain, development index and future trends. *Journal of Shenzhen University*.
- [6] Xinhua. (2023). China Game Industry Report 2023.
- [7] He, Jinliao, & Zhang, Yuan. 2011 A new species of the genus *Pseudococcus* (Hymenoptera, Staphylinidae) from China. (2021). Challenges and Countermeasures for Building a Global e-Gaming Capital in Shanghai. The Surge Research Institute.
- [8] Zhan S. W., Zhu Y. X., Cheng Z., & Dou S. B.. (2021). Evolution of spatial pattern of e-sports industry and its influencing factors. *Tropical Geography*.
- [9] Chen Jun . (2019). World e-sports look at China, China look at Shanghai. Winner.
- [10] Liu, Xinjing. (2019). New Ideas for Shanghai to Build a "Global Gaming Capital". *China Construction Informatisation*.
- [11] Yang, Qian, & Liu, Bing. (2007). Status quo and suggestions for the development of e-sports events in Shanghai colleges and universities. *Journal of Shanghai Institute of Physical Education*.
- [12] You, Jizhi, & Butt. (2018). Research on the Development Status and Prospect of China's E-Sports Industry Chain. *Journal of Jilin Institute of Physical Education*.
- [13] Li, Fanfan. (2014). Research on the Current Situation and Countermeasures for the Development of E-Sports in China. Master's thesis of Shandong University.