

The impact of the novel coronavirus pneumonia on China's sports industry: towards post pandemic development opportunities

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Abstract: The new pandemic situation brought about by the novel coronavirus pneumonia, officially named COVID-19 disease by the World Health Organization has restricted the development and formation of Sports Science in China. But as far as the sports industry is concerned, there is an opportunity to be embraced. This pandemic-inspired undertaking would be based on the spirit and strength of collective action that can only be solved by people coming together. In this paper, China's sports industry will be explored using pertinent surveys and subsequently, the impact of the pandemic on China's sports industry will be analyzed. It will also point out the new trends and development opportunities of China's sports industry after the worldwide crisis. The countermeasures for a sound and sustainable development of sports competition industry, sporting goods manufacturing industry and sports training industry are presented. Because of the particularity of sports industry and its difference from other industries, we should take advantage of these opportunities to uplift the current state of China's sports industry towards the overall economic recovery after the pandemic.

Keywords: novel coronavirus pneumonia; COVID-19; pandemic; coronavirus; China; sports industry; sports competition industry; sporting goods manufacturing industry; sports training industry.

I. INTRODUCTION

In the early stage of 2020, the new type of novel coronavirus pneumonia has been pervasive in China and all over the world. The coronavirus pandemic has sent blast waves around the globe, leading to a public health emergency that has killed thousands and plummeted the global economy. It made China's economy vulnerable, including its sports industry. Without ignoring the realities we face, it is clear that the sports industry is hopeful by reaching for positive messages out of these current pressing issues - the painful blow the coronavirus has brought to China's sports industry and the post pandemic roadmap towards national recovery by uplifting sports, fitness and health.

II. RESEARCH METHODOLOGY

This study utilized the documentation method. Pertinent data and surveys were considered by browsing through and collecting from a large number of literatures, publications, various books, periodicals and internet resources and sports related surveys of the National Bureau of Statistics of China.

A. The overall impact of the pandemic on sports industry in China

When SARS occurred in 2003, the scale of China's sports industry was very small. Seventeen years later, the sports industry began to take shape. By the end of 2018, the total scale of China's sports industry reached RMB 2657.9 (see Table 1), with the added value accounting for 1.1% of China's GDP, showing a good momentum of development. At present, the novel coronavirus pneumonia has a pessimistic impact on the sports industry. From 2015 to 2018, the total scale of China's sports industry had grown by 18.41% annually. Based on this growth rate, the total scale of China's sports industry would have reached RMB 3,147,219 million in 2019, and RMB 3,726,622 million in 2020. But during the unusual pandemic period, it negatively impacted on the scale of hundreds of billions of yuan for China's sports industry every month.

Table 1. TOTAL SCALE OF CHINA'S SPORTS INDUSTRY IN 2015-2017

Particular Year	Total Output	Added Value	Increase in Total Expenditure
2014	13574.71	4040.98	
2015	17107	5494.4	26.02%
2016	19011.3	6475	11.13%
2017	21987.7	7811	15.65%
2018	26579	10078	20.88%

(Source: National Bureau of Statistics)

A.1. Impact of the pandemic on sports competition industry

Presently affected by the novel coronavirus pneumonia, at least 100 events have been cancelled, suspended or postponed in China. The sports competition industry is greatly affected as an important support platform of sports industry. Professional teams, sponsors, spectators, cultural and creative services, as well as catering, entertainment and accommodation have been badly affected in a short span of time. From 2015 to 2018, the average annual growth rate of China's sports competition industry is 25.10%. Based on this growth rate, the scale of sports competition industry in 2019 would have reached RMB 36.52 billion, and in 2020, RMB 45.68 billion (see Table 2). It is estimated that the new outbreak has unfortunately impacted China's sports competition industry of several billions of yuan per month.

TABLE 2. TOTAL SCALE OF SPORTS COMPETITION AND PERFORMANCE INDUSTRY IN 2015-2018

	Total Scale of Sports Competition and Performance Industry (100 million yuan)
2015	149.5
2016	176.8
2017	231.4
2018	292

(Source: National Bureau of Statistics)

A.2. Impact of the pandemic on sports training industry

This pandemic has an adverse impact on the sports training industry. Without its end, the traditional face-to-face sports training will not be started, and many sports training institutions across the country will fall into a state of suspension. Even if online training is adopted, it is difficult to generate substantial benefits in the short term due to various pressing conditions. From 2015 to 2018, the average annual growth of sports training industry was 109.8% (see Table 3). Based on the calculation of the average growth rate of 17.40% in the previous three years, the total scale of the sports training industry in 2019 would have been RMB 2,021.6 billion and the total scale of the sports training industry in 2020 was only RMB 237.33 billion. It can be figured out that the pandemic has negatively affected the scale of the sports training industry of several billions of yuan every month.

TABLE 3. TOTAL SCALE OF SPORTS TRAINING INDUSTRY IN 2015-2018

	Total Scale of Sports Training Industry (100 million yuan)
2015	247.6
2016	296.2
2017	341.2
2018	1722

(Source: National Bureau of Statistics)

A.3. Impact of the pandemic on sporting goods manufacturing industry

At present, the crushing impact of the novel coronavirus pneumonia on the sporting goods manufacturing industry has been inevitable. According to the statistics of China's Tianyancha software, most of China's sporting goods manufacturing enterprises have been established for about 5-8 years, with only a small scale, low technical content, little accumulation of enterprises, and low anti-risk ability such as capital reserve. Sadly, at the moment, this particular manufacturing industry has been experiencing short-term production lag due to the delay in workers' resumption of work, slowdown in circulation and other reasons. The unfortunate impact of low consumption, disruptions of service and slashed import and export fields have also been spreading within the sporting goods manufacturing industry as reflected in the reduction of orders and inventory of the sporting goods. It is also noteworthy that as the coronavirus infections surge worldwide, everyone are forced to stay at home which significantly inhibited the consumption of these goods. Nonetheless, the online retail also has its identified flaws because of a certain degree of "traffic control" problems. Thus, the unusually busy online logistics system caused delays on the delivery of the sporting goods as well.

The Purchasing Managers Index (PMI) index (see Figure 1) as of April, 2020 shows the negative impact of the pandemic. In February, 2020, the lowest PMI index of both manufacturing and non-manufacturing industries drastically decreased by 27.44% and 45.49% respectively, which has been reflected by relevant indicators.

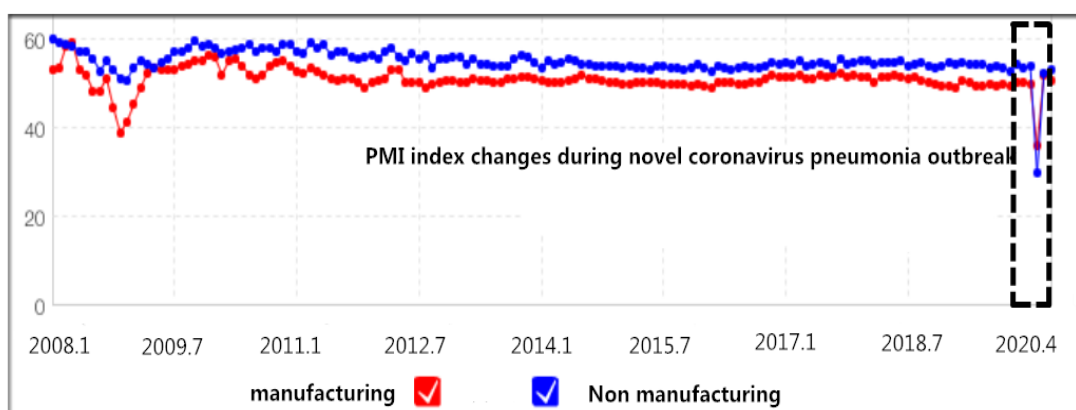


FIGURE 1. CHANGES OF PMI FROM JANUARY 2008 TO APRIL 2020

(Source: China Federation of Logistics and Purchasing)

B. Analysis of the impact of the pandemic on China's sports industry

B.1. On sports competition industry

Presently affected by the novel coronavirus pneumonia, there are at least 100 cancellations, suspensions or postponements in China's professional leagues, including the Super League and Chinese Basketball Association (CBA), and 15 more famous sports events (see Table 4). Naturally affected too are the professional teams, sponsors, spectators, cultural and creative services, catering, entertainment and accommodation. In some areas in the country, stadiums and gymnasiums have been transformed into shelter hospitals to accommodate the need for health care amid the coronavirus pandemic. As an important support platform of sports industry, sports competition industry is dreadfully affected.

TABLE 4. INFORMATION ON POSTPONEMENT OF DOMESTIC SPORTS EVENTS

Partial postponement or cancellation, change of venue events	Original venue	Original time
2020 CSL (postponed)	Nanjing	2020.2.22
2020 CBA (postponed)	Dongguan	2020.2.1
2021 The 31 st Universiade (postponed)	Chengdu	2021.8.8-8.19
Asian Indoor Track and Field Championships (cancelled)	Hangzhou	2020.2.13-2.14
2022 Yanqing Stop of Skiing World Cup in Winter Olympic Test (cancelled)	Yanqing	2020.2.15-2.16
2020 World Indoor Track and Field Championships (one year later)	Nanjing	2020.3.13-3.15
2020 Asian Wrestling Qualification of Tokyo Olympic Games (changed venue)	Xi'an	2020.3.27-3.29
Table Tennis Asia Cup (postponed)	Wenchang	2020.2.28-3.1
Women's Basketball Olympic Qualification (changed venue)	Foshan	2020.2.6-2.9
2020 World Snooker China Open (postponed)	Beijing	2020.3.30-4.5
2020 Tokyo Olympic Women's Asian Qualifier (changed venue)	Wuhan	2020.2.3-2.9
Golf Ying Fung Bank Hong Kong Women's Open (postponed)	Hong Kong	2020.2.28-3.1
2020 Super Cup of China Football Association (postponed)	Suzhou	2020.2.5
The Fourteenth National Winter Games (postponed)	Neimenggu	2020.2.16-2.26
Diving World Cup Series (cancelled)	Beijing	2020.3.6-3.8

(Source: General Administration of Sport of the People's Republic of China)

B.2. On sports training industry

The sports training industry has been remarkably affected by the novel coronavirus pneumonia due to the following factors:

Stores are at risk of closing.

Most of the sports venues within the pandemic areas face the risk of closing since the willingness and frequency of the masses to go out for fitness has been greatly reduced. People will value self-protection more than sports training in the middle of the pandemic.

Increased cash flow pressure.

Sports training industry is a human intensive industry, with high investment and high rent costs. Therefore, sports training industry is a business with high cash flow requirements. Affected by the pandemic, there will be a large number of sports stores closing if the situation continues until the end of this year.

Facing the risk of member losses and employee layoffs.

Although the sports training industry has announced the synchronous postponement of relevant training, the lack of people connection for a long time will lead to the loss of a large number of members, possibly resulting to store closures and eventually the painful employee layoffs.

B.3. On sporting goods manufacturing industry

The sporting goods manufacturing industry has been seriously affected by the novel coronavirus pneumonia due to the following reasons:

Sporting goods manufacturing firms shut down.

The shutdown of Chinese sporting goods manufacturing firms from the coronavirus outbreak has been upsetting the supply chain processes as manufacturers feel the pinch from shortages of materials and travel restrictions on staff. Because of social distancing restrictions and disruptions to supply chains, sports manufacturing production was

immediately disrupted. Because of the initial large drop in sporting goods production and depletion of inventories, we may not see a further drop in overall production at this time yet. It can be predicted that sports manufacturing activities will remain below pre-COVID-19 levels for more than a year.

Export of sporting goods blocked.

In recent years, China has risen to become the largest source of imports for the Southeast Asian countries and others. However, world trade is expected to fall in 2020 as the COVID-19 pandemic disrupts normal economic activity and life around the world. The wide range of possibilities for the predicted decline is explained by the unprecedented nature of this health crisis and the uncertainty around its precise economic impact. Amid the pandemic, people are banned from traveling, goods shelved and investments stalled. With these reasons presented, the COVID-19 will have the tendency to erode the Chinese influence on the export of sporting goods to the world.

Increased risk of layoffs in sports manufacturing industry.

The sports manufacturing industries are suffering in the current pandemic situation and the pain is now translating into layoffs. Diminishing consumer confidence, possibly drastic retail-traffic declines, and temporary store closures are evolving risk factors that depend on uncertain variables like the topographical spread of the virus and the timing of eradication solutions. The National Basketball League for instance suspended its regular season indefinitely. Major League Baseball canceled the remainder spring training, and the National Hockey League said it's suspending the 2019-2020 season, effective immediately. Most of these organizations depend on the supply of sporting goods from China.

Diminishing demands of famous sports equipment brands.

Stock market is the barometer and leading indicator of economic development. After the outbreak, the stock prices of famous Chinese sports goods brands Li Ning, Anta, Tebu, 361 and so on fell collectively. It will take some time for the capital market to transmit to the real economy, but the pandemic cannot be controlled in a short time, which will have a great impact on several famous sports equipment brands, and then affect the development of the whole sporting goods manufacturing industry in China.

C. New trends in sports industry

Peter Drucker once pointed out that "the greatest danger in turbulent times is not the turbulence itself, but still doing things with the logic of the past". The onset of 2020 in fact gave us a wake-up call. A reshuffle on what we take as conventions and norms of the world around us. It fractured perfectly crafted and synchronized global processes, as well as supply chains and systems. It obliges us to reflect and adapt to the changing consumer habits but even more so it teaches us. This goes to show that in turbulent times, the first task is to adapt to sudden change, to make sure of the country's capacity for survival, to make sure of its structural strength and soundness, of its capacity to survive a blow and to avail itself of new opportunities.

The pandemic experience can also be correlated with the perspective of commercial law's cost benefit analysis which means a process used primarily to weigh the sum of the benefits or gains of an action against the negatives or costs of that action. It can be inferred that the novel coronavirus pneumonia may have a negative impact on the overall economy, but the opportunity to bounce back is huge. There is a hope. The world may be going through an unusual lockdown, and these are strange, difficult and anxious times for everyone. Yet there are some reasons to have hope for the world once we get through this.

D. Post pandemic development opportunities in sports industry

The trend of sports consumption and demand will heat up after the pandemic

Zhong Nanshan, Academician of Chinese Academy of Engineering said in his video interview with CNN on May 16, 2020, that physical exercise is an extremely effective way to improve immunity and resistance to viruses. Having said this, the people will pay more attention to health, which will provide strong impetus for the development of sports industry. After the pandemic, it is inferred that people will pay close attention to their own health and that their desire to take part in physical exercises to improve their health will be stronger. Thus, sports consumption will be more in demand.

The clear purpose of national fitness after the pandemic

Traditionally, it has become a direct purpose for the vast majority in China to take fitness seriously by shaping up, most especially every after Spring Festival. However, the pandemic put on hold this chance and that the people were put in the

inconvenience of home-based fitness due to lockdowns. After the pandemic, the enthusiasm will be more propelled to participate in national fitness activities. As a consequence, the public will have a clear purpose of enhancing physical fitness through national fitness. Having cited these reasons, there is hope that sports consumption will increase significantly.

Sports industry develops towards diversification, digitalization and integration

The new technology will further penetrate into the sports field, making the sports industry continue to integrate education, medical treatment, tourism, culture and other resources. It will develop towards the direction of globalization, diversification and digitalization. A more personalized and agile production of sporting goods will become the trend in order to carry out services based on the diversified needs of the people. The sports industry should be able to commit to providing users with professional and scientifically based sports and health solutions.

New cross domain platform development system of sports industry will be built

Cross industry and cross field sports industry interconnection platform will be formed to promote the agglomeration and docking of sports industry innovation, and the wide applications of new technology will provide strong creativity for the development of sports industry. For example, the companies that produce high-quality sports and leisure clothing for can shift or reorganize to produce protective masks for the general public's consumption.

E. Countermeasures for a sound and sustainable development of sports competition industry, sporting goods manufacturing industry and sports training industry

Sports competition industry

The coronavirus pandemic meant massive cuts for the sports and outdoor world in China and the world. The future of sports competition is also likely to have changed. It seems that due to the global lockdown and social distancing regulations, sports is progressively experienced alone in quiet outdoor spaces, or else at home alone or with family members with people contact only through a camera and computer screen. Although a conclusive evidence is yet to develop, there are indications that the use of tracking technology, the advancement of e-sports and online courses could become even more prevalent in China and all over the world.

The pandemic could be a game changer in the sports world. As Mike Cusack, the longtime Wright State University athletics director said, "We've never faced anything like this, but every time we have faced something new, something unknown, we've come together and found a way through it. And deep in my heart I feel we will this time, too. We always find a way to band together in our toughest times. And when we do, we come out of it stronger. Whenever that happens this time, we may well be wearing a mask, but we won't celebrate with a handshake."

Undeniably true that because of the worldwide pandemic situation, sports competitions halted, leagues stopped playing, and games, races and events everywhere were postponed or canceled. Even the 2020 Olympics were pushed back a year. While the world is still groping in the dark for proven treatment or vaccine for COVID-19, many leagues in China have either been gradually returning to action already or are planning to resume, backed up by numerous safety precautions, including no spectators. Slowly but surely, sports competitions will definitely return.

As Nelson Mandela once said: "Sport has the power to change the world. It has the power to inspire. It has the power to unite people in a way that little else does." With the world in the middle of the coronavirus pandemic and people feeling more isolated now more than ever, with borders closed and stay-at-home rule in place, sports—including athletes, coaches, leagues, teams and fans—can again prove that the power of solidarity of more people is greater than any single individual after the pandemic is over. This too shall pass.

Sports manufacturing industry

Sports manufacturing and retail businesses using manual processes are ceasing operations in the light of international restrictions on group gatherings. Sports retail brands have been forced to close their physical stores as countries around the world enter states of lockdown. Naturally, the global pandemic has led to many brands re-evaluating their strategies. In response to the crisis, the Chinese sports manufacturing businesses should identify and pursue opportunities in the online sphere since online consumption may be the mainstream of sporting goods manufacturing in the future. Nevertheless, sports will still prevail after the pandemic. The World Federation of the Sporting Goods Industry (WFSGI) has conducted a confidential survey covering the impact of COVID-19 on sport industry businesses around the world.

Around 70% of respondents see running and outdoors as the most appealing sports after the pandemic. A little less than 50% consider walking to be practiced most after the pandemic. Around 20% consider basketball and soccer to take that position. Finally, cycling is also seen as a popular activity after the pandemic.

With this, the country will again see a development in its economic situation and a global increase in people's demands on sporting goods being one of the world's top suppliers of sporting goods. The benefits of sports have been very well communicated in the middle of the coronavirus pandemic, with more and more people still getting engaged with sports. With a growing interest from Chinese for a healthy life and healthy body, sporting goods in China will still represent an attracting market.

Sports training industry

One of the most affected businesses during the coronavirus pandemic are fitness clubs and sports training centers in China, as government measures like lockdown and community quarantine do not allow these facilities to operate. Gyms shut down, sporting fixtures suspended, and owners faced with financial losses. China's fitness industry has taken a huge blow from the COVID-19 outbreak, with people now fighting to get back on their feet.

The pandemic has forced the general public to stay at home and find creative ways to remain in tip-top shape. While the concern over COVID-19 appears to be growing, the sports training industry can use appropriate networks to carry out online publicity so as to maintain customers and at the same time, actively carry out online fitness, online training and other sports. The leap in stay-at-home fitness has created huge online traffic for sports apps. PPTV, a sports video website, and fitness app Keep both launched in-home fitness courses designed for different ages. Under the pandemic, the sports training industry bent but didn't fully break. With the pandemic now largely being contained in China, the country's sports fitness industry is now hitting the reset button, as it seeks to reclaim its momentum, embrace changes and find the silver lining in the cloud.

III. CONCLUSION

All Chinese major sports events have been cancelled or postponed for the first time in many years as the pandemic takes its toll worldwide. Sports in China is a lucrative business and almost recession-proof. But now, the sports industry is experiencing an economic blow by the coronavirus pandemic. Athletes, organizations and thousands of people who work at sporting events are negatively affected. Needless to say, the impact of the novel coronavirus pneumonia on China's sports industry, specifically, sports competition, sporting goods manufacturing and sports training has been adverse. As the sports industry is under threat, it has to adapt to measures to counter the COVID-19 towards post pandemic development opportunities. So, can China's sports industry survive the outbreak? The answer is yes.

China, being one of the world's largest economy has been gradually striking back to life, after suffering a devastating blow from the coronavirus pandemic, which originated in the city of Wuhan in Hubei Province in late 2019. Several weeks of government-imposed lockdowns on key cities led to sharp declines in manufacturing output, retail sales and other economic activities. Overall, gross domestic product (GDP) dipped almost 7 percent in the first quarter, China's first economic shrinkage in more than forty years. Nonetheless, the impact of the pandemic is temporary. China's economy has strong resilience and great potential, while the fundamentals for high-quality development will not change.

These anxious and unusual times may have brought unplanned difficulties. The road to recovery is going to be a struggle in itself. After looking at a wider range of indicators and having clarity on how different factors will impact the sports industry in short and long term, it will allow time to plan. This means the sports industry can implement and adjust the right strategies for them as we move on. As a nation, the best of human nature can rise to the challenge. We should seize the development opportunities and execute our roles positively towards our recovery and the whole world.

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