

# Consequences of COVID-19 on Iran's economy and sports industry: Analysis and improvement strategies

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## ABSTRACT

The aim of this study was to analyze the effects of COVID-19 on Iran's economy and sports industry and to provide solutions to compensate for these losses. The present study was descriptive-survey in terms of its practical purpose and the method of data collection. In the first (qualitative) phase, 24 interviews were conducted with economics experts and sports economics faculty nationwide. In the second (quantitative) phase, 610 questionnaires were distributed and analyzed—both in person and online—among postgraduate sports management students across the country. The results showed that the spread of the COVID-19 virus did not have only negative effects and it also had many positive effects on the sports industry. The sports industry can have a very high capacity to adapt to the crisis of the spread of COVID-19 and similar crises. Holding classes and workshops in various sports fields and sports sciences online, paying more attention to family sports, sports at home and open spaces and in the economic sector, during the period of the COVID-19 epidemic, online sports businesses flourished and the managers of sports complexes found financial alternatives. Overall, the negative effects of the COVID-19 pandemic, especially the economic ones, were more significant than the positives for sports, mainly due to its sudden onset, rapid spread, and the sports industry's lack of preparedness.

## KEYWORDS

Sports Industry; Economy; COVID-19; Sports Management; Online Business

## 1. INTRODUCTION

Currently, the world is facing a very serious crisis called the Corona virus and the epidemic of this virus is still spreading (Craven et al., 2020). Corona viruses are a large family of viruses that have a different genetic structure. The outbreak of this virus began in December 2019 in Wuhan, China, and widespread human-to-human transmission was reported on March 17, 2020 (Zhu et al., 2020). This disease is a contagious and acute respiratory syndrome caused by human-animal interaction (Parnell et al., 2020). This disease has a global scope and no continent is out of its grip, and it has shaken the society we have built over the years (Parnell et al., 2020). With the passage of time, global concern increased (Wang et al., 2020). The global fear of the rapid spread of the corona virus led to the creation of fundamental restrictions in life around the world (Hellewell et al., 2020). And this situation disturbed the health and economy of countries (Gallego et al., 2020).

After the epidemic of Covid-19 in all regions, many medical, social, cultural, economic and political trends have been formed in response to this disease (Evans et al., 2020) and various protective measures by the authorities, including social distancing, closing businesses (Corsini et al., 2020), closing schools and universities, banning travel, banning cultural-sports events and other social events (Hammami et al., 2020). International, regional and local travel restrictions immediately affect national economies, including tourism systems, i.e. international travel, domestic tourism, daily visits, and various sectors such as air transportation, cruises, transportation. It affected public transport, accommodation, cafes and restaurants, conferences, festivals and meetings. Many countries adopted travel bans, closing borders or introducing quarantine periods, and international and domestic tourism declined sharply (Gössling et al., 2020). The sports industry was no exception to this rule; so that Covid-19 and the situation prevailing in the world caused changes in the sports industry. For example, the postponement of the Olympic and Paralympic Games in Tokyo (Parnell et al., 2020; Gallego et al., 2020) mentioned the cancellation or postponement of prestigious and important sports leagues such as the English Football League (Clarkson et al., 2020) and the closure of social-sports events and sports venues (Hammami et al., 2020). Athletes also sat at home during these turbulent times. In addition, the social distance plan was associated with consequences such as the closure of sports facilities such as parks and gyms, and many facilities were not available to resume sports activities (Gilat et al., 2020).

Interim closure of prestigious leagues and competitions in different countries, holding competitions without the presence of spectators, whispers of cancellation of some leading national and international competitions and closure of health centers and sports clubs, and as a result, the

retail and wholesale market of goods became stagnant. Sports itself has witnessed the economic effects of this disease on various dimensions of the sports industry (AIS, 2020). For this purpose, different estimates of the economic losses suffered by the sports economy in different countries have been published. The effects and consequences of the spread and epidemic of Corona have been negative in the economic dimension and this is inevitable for all countries of the world (Toresdahl & Asif, 2020).

As it is known, the effects of the corona virus were not only on the economic sectors of sports, or even it can be admitted that all the effects of this virus on sports were not negative, and it also had positive effects that deserve to be studied and investigated (NBA, 2020). Cruyff (2020) states that wherever we examine sports in the world, we see different effects of the corona virus crisis.

The one-year postponement of the Tokyo Olympics and Euro 2020 is only part of the impact of this small virus on the sports world; the postponement caused the organizers of these games to face heavy financial losses (IOC, 2020). The suspension of the world's prestigious football leagues in the early months of the spread of the corona virus and after that the holding of matches without the presence of spectators has led to a significant decrease in the income sources of football clubs, including television broadcasting rights and ticket sales, which were dependent on the league. And even the stocks of the clubs fell and their financial future was jeopardized (Hughes, 2020). Keep in mind that in smaller cities and lower division leagues, a significant part of the economy goes away from the activities of these sports teams. In fact, these players, who have astronomical incomes especially in the first class leagues, may be the least harmed. In a sports club, in addition to coaches and players, many people work behind the scenes; from the club's kitchen to cleaning, masseurs and arrangements; with the closing of the competitions, there is usually no work left for these people (Safania & Brahmand, 2020).

Ravalli & Musumeci (2020) stated that quarantine and staying at home causes people to be inactive and its negative effects may be even greater than the negative effects of Corona; Therefore, sports organizations are obliged to provide solutions for the development of sports at home. Also, Hammami et al. (2020) stated that corona has changed the general shape of sports and with the formation of home quarantine, the home is the main environment for doing sports activities. Corona has also faced the sports community with a financial crisis, and this financial crisis has included several months of unemployment for coaches, managers and employees of sports venues and competitions. In the business sector related to the production and presentation of sports goods and

equipment, due to the closure of places, spaces and sports clubs and the impossibility of doing sports, people feel the need to buy sports equipment and clothing less than before. Sports clubs also do not need to buy equipment due to closure, and the consequence of this is the reduction of domestic production and sales, as well as the reduction of the import of sports goods and equipment (Timpka, 2020).

Since the outbreak of the corona virus, researchers in various fields have investigated this phenomenon from various aspects. In general, the researches carried out regarding the corona virus can be divided into two parts: The first part is epidemiologic research, in order to know the pattern of the spread of the virus and predict its future trend under different assumptions, intervention measures and estimation of the consequences of the outbreak on the health status of the society are carried out, and the results of these researches are used in health planning as well as health protocols and control measures are used. The second part is the research that is done in order to estimate the effects of the outbreak on different societies. In a research, Nicola et al. (2020) stated that a huge crisis has occurred in the sports industry and this industry is struggling with many problems. Also, Parnell et al. (2020) in their research titled "Corona and Sports" investigated the effects of corona on sports and sports competitions and stated that managers are not currently prepared to face such a crisis. The results of this research showed that corona has caused the general performance of sports organizations to face fundamental changes. Also, they stated risk assessment as one of the most important factors that with proper risk assessment and management, one can have better performance to face similar crises (Parnell et al., 2020).

Pillay et al. (2020) investigated the effects of Covid-19 on South African elite and semi-elite athletes. In this study, it was concluded that covid-19 has consequences on the physical, nutritional and psychological condition of athletes. Gallego et al. (2020) investigated the consequences of the Corona virus on the 2020 Tokyo Summer Olympic Games. In this study, the situation of the 2020 Olympics (before the announcement of the postponement of this event) was investigated, and some preliminary challenges and solutions were mentioned. In another study, cardiovascular recommendations were given for the return of athletes (non-sick, infected with Covid-19 and recovered) to the field of sports (Phelan et al., 2020). In a study, Evans et al. (2020) dealt with the confrontation of exercise with the Covid-19 pandemic. In this study, it has been stated that currently it is not possible to identify all the consequences of this virus on sports and sports participation (especially the long-term consequences). The purpose of their research was to provide a space for thinking in this field. Hammami et al. (2020) provided specific recommendations for physical

exercises at home during quarantine. This research has provided useful information about physical activity at home for sedentary people, including children and teenagers, which can be done during an epidemic or outbreak of other infectious diseases. In their study, Clarkson et al. (2020) examined the consequences of the coronavirus on the future of women's elite football in England. Parnell et al. (2020) investigated the corona disease in major sports events. The main focus of their research was on the initial effects of Covid-19 on the Euro 2020 event. In addition, the 2020 Olympic Games and community recreational football have also been mentioned. This study states that covid-19 can affect the way sports work in the future and the need for organizations and managers to pay attention to this issue is pointed out.

Humanity has faced similar events in the past, such as influenza, Ebola, Sars, the Black Death (in 1346-1353) or the coccidioidomycosis epidemic (in the 16th century) (Evans et al, 2020). During the influenza virus epidemic, two major sporting events, the Vancouver 2010 Winter Olympics and the Soccer World Cup, were held in South Africa. During the outbreak of the Ebola virus, the 2015 African Cup of Nations and during the outbreak of the Zika virus, the 2016 Rio Olympics in Brazil were held. Although these events were held at the same time as the mentioned infectious diseases, no special problem arose (Parnell et al., 2020). However, the current situation is extraordinary and special, because this disease has spread globally, regionally and nationally and has been associated with social, economic and environmental consequences. Covid-19 has caused the shutdown of most industries, financial pressures, work-related challenges, travel disruptions, border closures, and has also been accompanied by a wide level of media coverage (Evans et al., 2020).

Therefore, considering the importance of the emerging crisis and considering the significant impact it has had on all industries, it becomes necessary to identify the challenges caused by this virus on all aspects of sports, and in line with that, measures in to deal with and improve the current and future situation. The purpose of conducting this research was to identify the consequences of COVID-19 on sports in Iran. So far, no comprehensive study that includes all aspects of Iranian sports has been done. The results of foreign studies cannot be generalized to the domestic situation of the country. According to the mentioned cases, the innovation aspect of the research is confirmed in relation to the topic and the research objectives. Therefore, the results of this research can help in completing the existing theoretical foundations and the scientific richness of this field and can be used as a foundation for future studies, which shows the theoretical importance of this research. Practically, all relevant organizations and managers can get to know the current and future challenges and take measures to deal with them. According to the mentioned cases, the researchers of the

present study are looking for ways to compensate for the losses caused by COVID-19 on Iranian sports.

## 2. METHODS

The current research is a descriptive-survey type of research and it was conducted in the field, and in terms of its purpose, it is in the category of applied research. In the first stage, the qualitative method of content analysis was used to build the model, and the descriptive-analytical quantitative method was used to test the model, and the correlation type based on the structural equation model was used. The mixed research method was sequential exploratory.

The tool used in this research was developed after conducting interviews and reaching theoretical saturation, which includes 33 items and in the form of 2 main components of positive consequences and negative consequences, in the form of five Likert options (very much, 5 points to very little, 1 point) were compiled. In the first part (qualitative) to conduct field interviews, the statistical population of the research was examined by experts in the field of economics in the country and members of the scientific association of economics in the country and members of the faculty in the field of sports economics. Qualitative research was selected (24 interviews with 24 people and continued until theoretical saturation). In the second (quantitative) part, due to the lack of precise tools in order to measure the variables investigated in the present research, firstly, based on library studies and the study of domestic and foreign articles, to examine the theoretical foundations of the research inside and outside and to get help from people who were interviewed in the qualitative section, and a researcher-made questionnaire was prepared and organized. The statistical population of the quantitative part of the research includes the students of Iran's sports management courses, which included the students of the provincial universities (Tehran, Alborz, Isfahan, East Azerbaijan, West Azerbaijan, Khuzestan, Razavi Khorasan, Kurdistan, Lorestan, Kermanshah, Gilan). According to the financial and time limitations of the research, 700 questionnaires (according to the sample size of Cochran in uncertain conditions) were distributed in person and virtually among the students of post-graduate education (major and doctorate) majoring in sports management in the country, out of which 610 completed the questionnaire.

The statistical analyses were carried out with the Statistical Package for the Social Sciences (SPSS) version 23. The statistical techniques that are described in the results section were applied. The statistical significance (p value) was set at  $p<0.05$ .

### 3. RESULTS

In the first step of coding, each of the main categories related to presenting the analysis model of the effects of COVID-19 on Iran's economy and sports industry was extracted. This was done by answering the main research question: *What are the consequences of the COVID-19 virus on the sports industry and sports economy?*

From the continuous comparative analysis of the initial results of open coding, in the form of positive and negative consequences, 5 core codes were revealed: "Negative consequences: economic and sports; Positive consequences: economic, sports and management".

**Table 1.** The negative consequences of the outbreak of Covid-19 on the sports industry and economy

Row	Features extracted from verbal propositions (concepts)	Categories	Area
1	Stopping sponsorships from sports teams	Sponsors	
2	Cutoff of sponsorships from athletes		
3	Problems in renting clubs		
4	Closing of clubs	Clubs	Economical
5	Financial loss to club owners		
6	Coaches		
7	Professional athletes	Unemployment of manpower	
8	Managers of private collections		
9	Employees of private collections		
10	Agents of holding events		
11	Reducing the import of sports equipment	Productive	
12	Decrease in sales of sports equipment		
13	Reduction of domestic production of sports equipment		
14	Inactivity of the general public		
15	Excess weight due to not exercising	Changing life style	
16	The habit of not exercising		
17	Decreased motivation to exercise		
18	Weakened physical fitness		
19	Weakened mental preparation	Professional athletes	
20	Inactivity of disabled and veteran athletes		
21	Change in the schedule of games		
22	Postponement of major sporting events (Olympics)	Sports events	
23	Change in the way sports events are held (without being a spectator)		

**Table 2.** Positive consequences of the spread of Covid-19 on the sports industry and economy

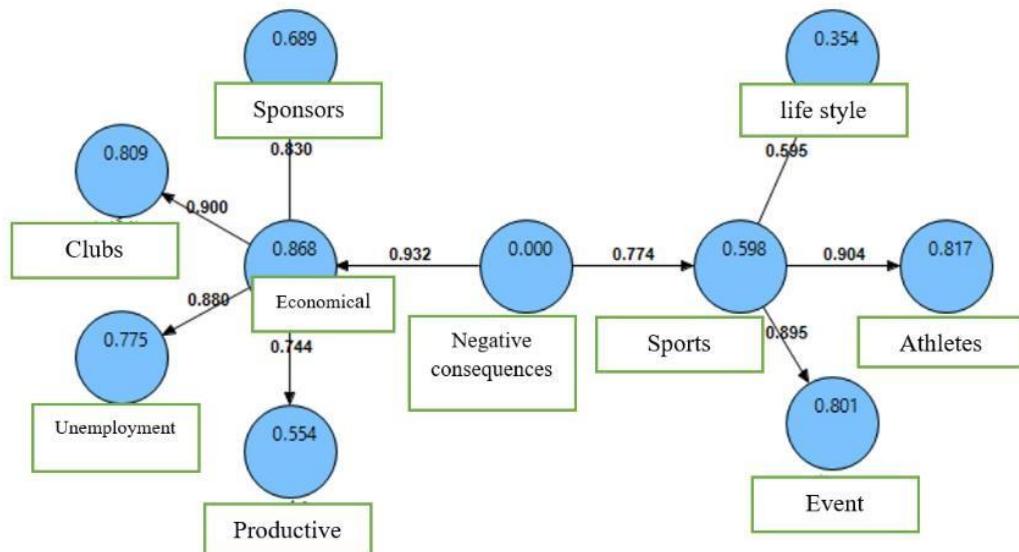
Row	Features extracted from verbal propositions (concepts)	Categories	Area
1	Greater preparation of senior sports managers for any type of epidemic		
2	Greater preparation of managers of sports complexes for unexpected events		Managerial
3	Changing the direction of attention from championship sports to popular sports		
4	More preparation of athletes for unexpected events		
5	Promote exercise at home		Sports
6	Promotion of online sports events		
7	Changing the view of sports in outdoor environments		
8	Familiarization of people with all kinds of home sports		
9	Finding financial alternatives by managers of sports complexes		Economical
10	The boom of online sports businesses		

Therefore, the results of 24 conducted interviews, through content analysis and open and axial coding, showed that negative consequences include economic and sports and positive consequences include economic, sports and management.

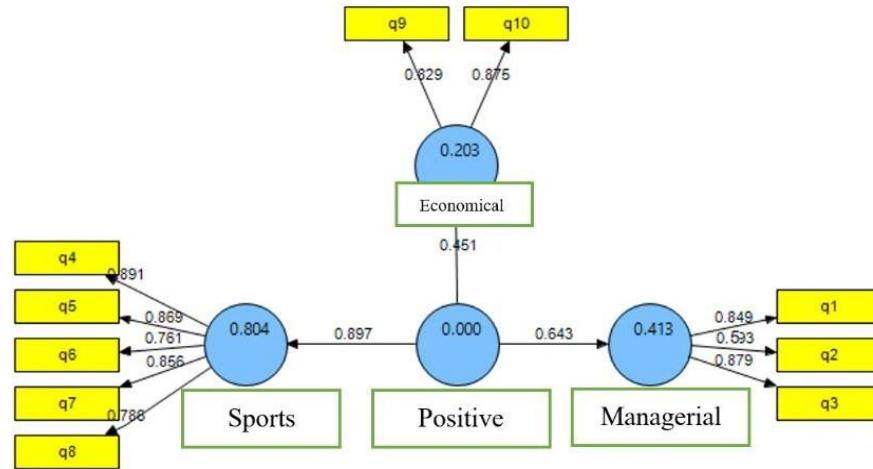
The results showed that the skewness is between -3 and -3 and the elongation is between -5 and -5; And the number of research samples is more than 200 people. But in the positive (economic factors) and negative (financial sponsors) consequences, there are no 3 items for each variable.

To check the fit of the measurement models, three criteria of reliability, convergent validity and divergent validity are used, and the reliability itself is done by checking factor loading coefficients, Cronbach's alpha coefficients, combined reliability and shared reliability. The criterion value for the appropriateness of factor load coefficients is 0.5. For all the questions, the coefficients of the factor loadings are more than 0.5, which shows the appropriateness of this measure. Here, none of the questions were deleted. The value of Cronbach's alpha and the combined reliability of

variables in all variables is higher than 0.7, which indicates the appropriate reliability of the model. In this research, the reliability of the variables is at the optimal level. Since the reliability is confirmed, it is possible to examine the assumptions by structural equations and the result can be generalized to the entire target society. The second criterion for examining measurement models is convergent validity, which examines the correlation of each variable with its questions (indices). According to the method of Fornell and Larker, who introduced the appropriate value for AVE above 0.4. For all variables, the AVE value is greater than or equal to 0.4. Divergent validity is the third criterion for examining the fit of measurement models, which in this research is used in both parts of the first method (questions related to each variable are more correlated to that variable than to other variables) and second (another important criterion that Divergent validity is determined by the degree of relationship of a variable with its questions compared to the relationship of that variable with other variables), so that the acceptable divergent validity of a model indicates that a variable in the model interacts more with its questions than with other variables. Divergent validity was confirmed when the AVE for each variable is greater than the shared variance between that variable and other variables in the model at an acceptable level. After examining the fit of the measurement models, it is time to fit the structural model of the research. As mentioned earlier, unlike measurement models, the structural model section has nothing to do with questions (manifest variables) and only hidden variables are examined along with the relationships between them.

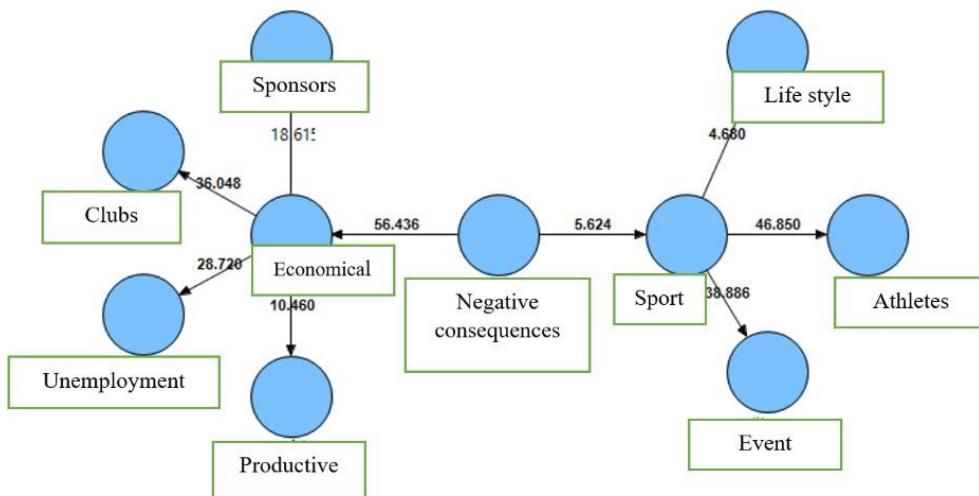


**Figure 1.** Model for measuring negative consequences

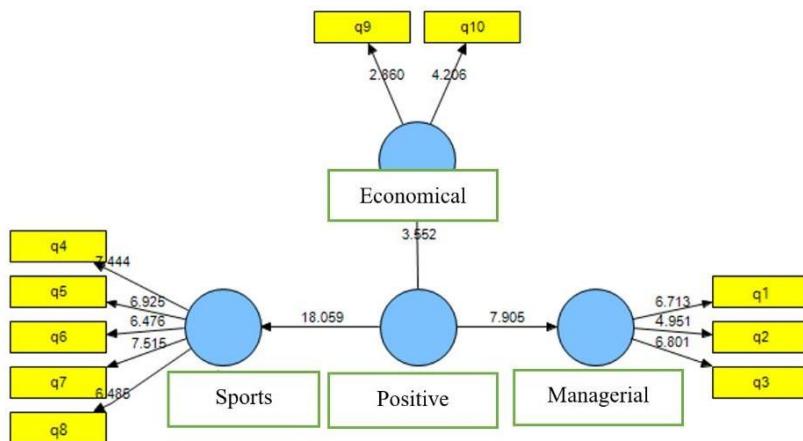


**Figure 2.** Measurement model of positive outcomes

To check the fit of the structural model of the research, several criteria are used, the first and most basic criteria are the significant t coefficients or t-values. If the value of these numbers exceeds 0.95, it indicates the correctness of the relationship between the variables and, as a result, the research hypotheses are confirmed at the confidence level of 1.96. Of course, it should be noted that the numbers only show the accuracy of the relationship and the intensity of the relationship between the variables cannot be measured with it.



**Figure 3.** Significant t coefficients (t-values) of negative outcomes



**Figure 4.** Significant t coefficients (t-values) of positive outcomes

$R^2$  value for exogenous or independent variables is equal to zero. In this part, the value of  $R^2$  for all variables is greater than 0.32. Q2 value: This criterion for the endogenous variable of mental preparation is greater than 0.15, which shows that the exogenous (independent) variable is average in predicting the dependent variable, and more for all the endogenous variables of the model. It is 0.32, which shows that the exogenous (independent) variables are strong in predicting the dependent variables and confirms the appropriate fit of the structural model of the research.

Overall model fit: The overall model includes both measurement and structural model parts, and by confirming its fit, the fit check is completed in one model. Considering the three values of 0.01, 0.25 and 0.36, which are introduced as weak, medium and strong values for GOF, in all variables, a value greater than 0.36 was obtained, which indicates a strong overall fit of the model. In the following, the relationships in the research model resulting from the qualitative part will be examined.

According to the relationships in both models of negative outcomes and positive outcomes, the T-Value in all relationships is greater than 2.58, so at the 0.99 level, each of the positive and negative outcomes is one of the consequences of the spread of the virus Covid-19 in the sports industry.

#### 4. DISCUSSION

The spread of the corona virus and people's concern about entering sports venues and engaging in sports and the restrictions imposed on this sport, many businesses and businesses related to the sports industry faced a decrease in demand and sales, goods and services. Of course, in

addition to negative consequences, the created restrictions have also resulted in positive consequences. The findings of the research through content analysis and open and axial coding showed that the negative consequences of the spread of Covid-19 on the sports industry include economic and sports components and the positive consequences include economic, sports and management components.

One of the negative economic consequences of the spread of Covid-19 in professional sports is the termination of cooperation between sponsors and sports clubs and athletes. Sponsors' relationship with clubs and athletes is always a win-win relationship; In such a way that both parties benefit. Sponsors are one of the most important sources of income for the sports industry, and these sponsors only support events, clubs and athletes through which they can introduce their goods and services to the target communities in the best way. However, due to the suspension and holding of sports events with special restrictions (including the absence of spectators in stadiums), sponsors' acceptance of clubs and athletes participating in these sports events has decreased. In this context, Nhamo et al. (2020) have pointed out the financial distress of sports organizations, the reduction or termination of athletes' salaries and the damages caused to financial sponsors. The closure of clubs is also one of the negative economic consequences of the spread of Covid-19; In such a way that it has caused problems in paying the rent of sports halls, financial loss to club owners and unemployment of coaches and professional athletes, managers and employees of the private sector and event organizers. Similar results were reported in the studies of Nhamo et al. (2020); Hammami et al. (2020). This issue is more visible in sports fields such as swimming or fields where athletes have physical contact, because in these sports, the severity of restrictions is much higher and even without paying attention to the restrictions, the athletes themselves are less willing to participate in sports activities due to the fear of getting infected.

According to Timpka (2020) governmental and non-governmental organizations as well as philanthropists can make a significant contribution to supporting sports industry businesses in the form of grants and loan payments. Another part of the sports industry that has suffered irreparable financial losses from the spread of Covid-19 is the production and sale of domestic sports equipment and the import of foreign sports equipment. The shutdown and restrictions caused by the spread of Covid-19 have caused the consumption of sports equipment by athletes to decrease, and for this reason, it has affected the production and sale of sports equipment. Of course, in the context of production closures and customs and transportation restrictions, this matter has not been unaffected.

The negative consequences of the Covid-19 pandemic are not limited to the economic sector and have also affected sports sectors. A huge number of people are interested in watching sports events in person or through mass media, while they may never play sports themselves. Due to changes in the schedule of some sports events and they have been postponed, many fans and spectators have been deprived of seeing sports events. An example of that was the 2020 Tokyo Olympics, which were held one year late in 2021. Many sports events are also held without the presence of spectators, which has deprived that part of society who were interested in attending stadiums and sports halls from watching these sports events in person. People's lifestyles have not benefited from the effects of the spread of Covid-19. People who participated in physical activities in public environments and sports clubs to maintain health, have abandoned sports activities due to the restrictions, environmental pollution and the difficulty of using a mask during physical activity. This issue has led to inactivity and related consequences, including overweight.

The lengthening period of restrictions caused by the spread of Covid-19 has reduced the motivation to exercise and in some way may eventually lead to quitting exercise. In this context, Narici et al. (2020) have pointed out the lack of physical activity during the outbreak of Covid-19, which has put people's physiological health at risk and has increased the incidence of neuromuscular, cardiovascular and obesity diseases. Of course, Schnitzer et al. (2020) believe that this decrease in participation in sports activities has occurred in active people and their activity level has decreased, but participation in exercise activities at home has increased for previously inactive and less active people during the Covid-19 outbreak. Professional athletes have also been weakened in terms of physical and mental fitness, and disabled and veteran athletes have also faced many restrictions in the implementation of sports activities.

The spread of the Covid-19 virus caused many psychological problems in athletes, such as fear of getting infected, anxiety about physical recovery in case of infection, lack of access to fitness centers, disturbed sleep, eating disorders, obsessions and family conflicts, inability to control stress, and lack of proper coping. Also, it has caused short-term or long-term depression (Frank et al., 2020). Also, limitations in two-way communication between coaches and athletes, providing feedback to athletes, monitoring athletes' performance and the issue of injury (Evans et al., 2020) are effective in weakening the physical fitness of athletes. It seems that, as Toresdahl & Asif (2020); Crawford et al. (2020) have pointed out, the officials of sports organizations should provide conditions for professional athletes to continue their sports activities with greater peace of mind, following the same health guidelines as before, and from Use innovations such as online training programs in sports

activities. On the other hand, considering the mental and physiological traumas inflicted on athletes, especially professional athletes and the disabled and veterans, it is very important to create a basis for supporting them.

The results of the research showed that the spread of the Covid-19 virus did not have only negative effects, but also had many positive effects on the sports industry. For example, in the economic sector, during the Covid-19 pandemic, online sports businesses have flourished and managers of sports complexes have found financial alternatives. Prohibition and reduction of traffic due to the fear of contracting the disease, not only in the sports industry but also in most manufacturing and service sectors, has led to the boom of online businesses and buying and selling online products, and probably after the end of the outbreak of Covid-19 due to the benefits of online buying and selling Online businesses continue to thrive. On the other hand, senior managers, managers of sports complexes, athletes, according to the experiences they have gained during the epidemic of the Covid-19 virus, have the necessary preparation to face any other crisis and can adapt themselves to critical conditions.

Another positive consequence of the Covid-19 pandemic is paying more and more attention to public sports, sports at home, sports in outdoor environments and promoting the holding of online sports events, which have received less attention before. However, due to the restrictions created for professional sports and championships and activities in clubs, as well as the increase in free time due to the closure of schools and some businesses, more attention has been paid to the mentioned sectors. In the research of Schnitzer et al. (2020); Hammami et al. (2020) it is also mentioned that the increase in attention to exercise at home during the outbreak of Covid-19. In fact, the sports industry seems to have a very high capacity to adapt to the crisis of the spread of Covid-19 and similar crises. Holding classes and workshops in various sports fields and sports sciences online, paying more attention to family sports, sports at home and open spaces, holding many sports competitions, especially in the public and educational sector (student competitions) online and video recording online shopping of sports equipment, running sports events without the presence of spectators and following health guidelines are just examples of ways to reduce the negative effects of the spread of Covid-19 on the sports industry. Moreover, due to the reduction of many costs, it has been welcomed by many stakeholders of the sports industry. In the post-corona era, the sports industry has a high desire to continue this trend and use new methods instead of traditional methods. Of course, due to the lack of necessary preparation and lack of crisis management in sports organizations, it seems that currently there is not enough infrastructure in the field of sports to implement these solutions as best

as possible, and it is necessary for sports organizations to take the necessary measures to improve the necessary infrastructure.

In general, it seems that the negative effects of the covid-19 epidemic, especially its negative economic effects, have had more impact on sports than the positive effects of the covid-19 outbreak, which is due to the sudden onset and rapid spread of the covid-19 virus and the lack of preparation of the sports industry for coping with this crisis is related. The negative effects of the Covid-19 pandemic have not only harmed the sports industry, but it seems that many ancillary industries of the sports industry, including tourism, aviation, insurance and hotel management, etc., have also been affected by the negative effects of not holding competitions, etc. However, this crisis was a wake-up call for the sports industry to pay more attention to crisis management in order to perform better in similar and possible crises in the future. Organizations and sports federations should design a comprehensive program to properly educate people and support athletes and implement these programs in the best possible way. The findings of this research can be used as guidelines in similar crises such as virus epidemics in the future, and the officials of sports organizations before being in such a situation, considering the negative and positive consequences mentioned in this research, alternative solutions for the sports industry take into account less impact.

Sports organizations have the duty to take the sports industry out of the crisis by accurately identifying the harms and benefits caused by these conditions, by holding effective meetings regarding the main issues, by thinking together and planning practical and creative strategies. Considering the identification of the direct and indirect effects of the spread of the corona virus and the discussions that were raised, it is suggested that sports clubs consider the capacity of the Internet, social networks and the virtual world more seriously in order to interact with their customers and to some extent from the concern reduce yourself. Also, providing training programs to customers through cyberspace, designing sports programs and software with the sports club brand, creating support platforms and financial support for club owners and sports coaches, creating a customer relationship management system in sports clubs and developing the system. Recording the information of sports club managers and coaches and providing different services at specific times are among the effective solutions for the owners of private sports clubs. Also, one of the sciences that helps in this critical situation is the science of marketing in sports. People who studied marketing topics took help from this science and created solutions for their business.

## 5. COMPENSATION SOLUTIONS AFTER COVID-19

1. Financial and credit support: Providing low-interest loans: for clubs, athletes and other sports organizations to maintain their activities. Allocation of government funds: to support the reconstruction and strengthening of sports infrastructure.
2. Tax facilities: Tax cuts: or tax suspensions for clubs and sports organizations to reduce the financial burden. Tax rebates for sponsors: Encouraging companies to invest in sports by offering tax rebates.
3. Development of digital and online sports: Online training platforms: for the education and training of athletes and coaches in limited times. Holding virtual competitions and online broadcasting of competitions to attract spectators and maintain revenues.
4. Marketing and advertising: Increase promotional activities: to attract new viewers and fans. Use of social networks: to connect more closely with fans and promote sports-related products and services.
5. Increasing investment in infrastructure: Updating and improving sports facilities: to increase the attractiveness of stadiums and clubs for spectators and athletes. Construction and development of new facilities: using public-private partnership to attract investment.
6. Incentive programs for athletes: Supportive and psychological programs: to maintain the morale and motivation of athletes. Fitness programs: to return to pre-pandemic conditions.
7. Diversification of income sources: Development of sales of ancillary products: such as sportswear, equipment and souvenirs. Cultural and recreational activities: holding cultural and recreational events along with sports competitions.
8. International collaborations: Attracting foreign sponsors: and cooperation with international sports clubs and organizations. Holding joint competitions and camps: to increase the level of interactions and exchange knowledge and experience.

Following these solutions can help improve the economic situation and rebuild the sports industry in Iran after the Corona pandemic and lay the foundation for further growth and development in the future. Also, in the following, other solutions are proposed to compensate for damages after Corona:

- Scope of research and innovation programs: Creating sports research and technology development programs to develop new methods of advertising and monetization, improving athlete performance, and spectator experience.

- Willingness to cooperate with technology companies: Encourage collaboration with technology companies to provide digital solutions to maintain connections with fans, improve the audience experience, and increase funding.
- Development of education and training programs: Providing education and training programs to increase people's skills in the field of sports, especially in areas that have received less attention due to lack of financial resources.
- Encouraging private investment: Creating favorable conditions for attracting private investment in the field of sports by providing financial facilities, tax discounts, and government guarantees.
- Development of socially responsible programs: Creating socially responsible programs for companies and organizations to support youth and social needs related to sports.
- Diversification of income sources: Developing sources of income other than sports, such as providing recreational and tourist services, holding cultural events, and advertising and exchanges with other industries.
- Development of data-driven marketing plans: Using new technologies to analyze data and improve marketing and sales strategies in the field of sports.
- Strengthening international cooperation: Strengthening international cooperation in the field of sports to attract investment, transfer technology, and create more commercial and cultural relations.

These solutions can help to compensate for the losses after COVID-19 and to the sustainable development of the sports industry in the future.

## 6. REFERENCES

1. Australian Institute of Sport (AIS). (2020). Framework for rebooting sport in covid-19 Environment. [https://www.ais.gov.au/\\_data/assets/pdf\\_file/0008/730376/35845\\_AIS-Framework-for-rebooting-sport\\_FA.pdf](https://www.ais.gov.au/_data/assets/pdf_file/0008/730376/35845_AIS-Framework-for-rebooting-sport_FA.pdf)
2. Clarkson, B. G., Culvin, A., Pope, S., & Parry, K. D. (2020). Covid-19: Reflections on threat and uncertainty for the future of elite women's football in England. *Managing Sport and Leisure*, 27(1), 1-12.
3. Corsini, A., Bisciotti, G. N., Eirale, C., & Volpi, P. (2020). Football cannot restart soon during the COVID-19 emergency! A critical perspective from the Italian experience and a call for action. *British Journal of Sports Medicine*, 54(20), 1186- 1187. <https://doi.org/10.1136/bjsports-2020-102306>
4. Craven, M., Liu, L., Mysore, M., & Wilson, M. (2020). *COVID-19: Implications for business*. McKinsey & Company.

5. Crawford, J., Butler-Henderson, K., Rudolph, J., Glowatz, M. (2020). COVID-19: 20 Countries' Higher Education Intra-Period Digital Pedagogy Responses. *Journal of Applied Teaching and Learning*, 3(1), 25-35.
6. Cruyff, J. (2020). *The impact of the Covid-19 on the management of sport organizations*. Johan Cruyff Institute.
7. Csató, L. (2021). Coronavirus and sports leagues: obtaining a fair ranking when the season cannot resume. *IMA Journal of Management Mathematics*, 32, 1-14. <https://doi.org/10.1093/imaman/dpab020>
8. Evans, A. B., Blackwell, J., Dolan, P., Fahlén, J., Hoekman, R., Lenneis, V., ..., & Wilcock, L. (2020). Sport in the face of the COVID-19 pandemic: Towards an agenda for research in the sociology of sport. *European Journal for Sport and Society*, 2(17), 1-11.
9. Frank, A., Fatke, B., Frank, W., Förstl, H., & Hözlle, P. (2020). Depression, dependence and prices of the COVID-19-Crisis. *Brain, Behavior, and Immunity*, 87, 1-19. <https://doi.org/10.1016/j.bbi.2020.04.068>
10. Gallego, V., Nishiura, H., Sah, R., & Rodriguez-Morales, A. J. (2020). The COVID19 outbreak and implications for the Tokyo 2020 Summer Olympic Games. *Travel Medicine and Infectious Disease*, 34(1), 1-3.
11. Gilat, R., & Cole, B. J. (2020). COVID-19, Medicine, and Sports. *Arthroscopy, Sports Medicine, and Rehabilitation*, 2(3), 175–176. <https://doi.org/10.1016/j.asmr.2020.04.003>
12. Gössling, S., Scott, D., & Hall, C. M. (2020). Pandemics, tourism and global change: a rapid assessment of COVID-19. *Journal of Sustainable Tourism*, 29(1), 1-20.
13. Hammami, A., Harrabi, B., Mohr, M., & Krstrup, P. (2020). Physical activity and coronavirus disease 2019 (COVID-19): Specific recommendations for home-based physical training. *Managing Sport and Leisure*, 27(1-2), 20-25.
14. Hellewell, J., Abbott, S., Gimma, A., Bosse, N. I., Jarvis, C. I., Russell, T. W., Munday, J. D., Kucharski, A. J., Edmunds, W. J., Centre for the Mathematical Modelling of Infectious Diseases COVID-19 Working Group, Funk, S., & Eggo, R. M. (2020). Feasibility of controlling COVID-19 outbreaks by isolation of cases and contacts. *The Lancet. Global Health*, 8(4), 488–496. [https://doi.org/10.1016/S2214-109X\(20\)30074-7](https://doi.org/10.1016/S2214-109X(20)30074-7)
15. Hughes, D. (2020). In the frame, road map for Australian sport on an uncertain journey through COVID-19. *Journal of Science and Medicine in Sport*, 23(7), 636-638. <https://doi.org/10.1016/j.jsams.2020.05.003>
16. International Olympic Committee. (2020) Joint statement from the International Olympic Committee and the Tokyo 2020 Organising Committee. <https://www.olympic.org/news/jointstatement-from-the-international-olympic-committee-and-the-tokyo-2020-organising-committee>
17. Narici, M., Vito, G., Franchi, M., Paoli, A., Moro, T., Marcolin, G., Grassi, B., Baldassarre, G., Zuccarelli, L., Biolo, G., di Girolamo, F. G., Fiotti, N., Dela, F., Greenhaff, P., & Maganaris, C. (2021). Impact of sedentarism due to the COVID-19 home confinement on neuromuscular, cardiovascular and metabolic health: Physiological and pathophysiological implications and recommendations for physical and nutritional countermeasures. *European Journal of Sport Science*, 21(4), 614–635. <https://doi.org/10.1080/17461391.2020.1761076>

18. National Basketball Association. (2020, March 12). NBA to suspend season following Wednesday's games. <https://www.nba.com/article/2020/03/11/nba-suspend-season-following-wednesdays-games>
19. Nhamo, G., Dube, K., & Chikodzi, D. (2020). *Impact of COVID-19 on the Global Sporting Industry and Related Tourism. Counting the Cost of COVID-19 on the Global Tourism Industry*. Springer, Cham.
20. Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., Agha, M., & Agha, R. (2020). The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *International Journal of Surgery (London, England)*, 78, 185–193. <https://doi.org/10.1016/j.ijsu.2020.04.018>
21. Parnell, D., Widdop, P., Bond, A., & Wilson, R. (2020). COVID-19, networks and sport. *Managing Sport and Leisure*, 27(1), 1-7.
22. Phelan, D., Kim, J. H., & Chung, E. H. (2020). A Game Plan for the Resumption of Sport and Exercise After Coronavirus Disease 2019 (COVID-19) Infection. *JAMA Cardiology*, 5(10), 1085–1086. <https://doi.org/10.1001/jamacardio.2020.2136>
23. Pillay, L., Janse van Rensburg, D. C. C., Jansen van Rensburg, A., Ramagole, D. A., Holtzhausen, L., Dijkstra, H. P., & Cronje, T. (2020). Nowhere to hide: The significant impact of coronavirus disease 2019 (COVID-19) measures on elite and semi-elite South African athletes. *Journal of Science and Medicine in Sport*, 23(7), 670–679. <https://doi.org/10.1016/j.jsams.2020.05.016>
24. Ravalli, S., & Musumeci, G. (2020). Coronavirus Outbreak in Italy: Physiological Benefits of Home-Based Exercise During Pandemic. *Journal of Functional Morphology and Kinesiology*, 5(2), 31-39. <https://doi.org/10.3390/jfmk5020031>
25. Safania, A., & Brahmand, R. (2020). Evaluation of the effects of coronavirus on the sports industry. *Journal of Educational Psychology* 16(56), 131-119.
26. Schnitzer, M., Schöttl, S. E., Kopp, M., & Barth, M. (2020). COVID-19 stay-at-home order in Tyrol, Austria: sports and exercise behaviour in change?. *Public Health*, 185, 218–220. <https://doi.org/10.1016/j.puhe.2020.06.042>
27. Timpka, T. (2020). Sport in the tracks and fields of the corona virus: Critical issues during the exit from lockdown. *Journal of Science and Medicine in Sport*, 23(7), 634–635. <https://doi.org/10.1016/j.jsams.2020.05.001>
28. Toresdahl, B. G., & Asif, I. M. (2020). Coronavirus Disease 2019 (COVID-19): Considerations for the Competitive Athlete. *Sports Health*, 12(3), 221–224. <https://doi.org/10.1177/1941738120918876>
29. Wang, C., Horby, P. W., Hayden, F. G., & Gao, G. F. (2020). A novel coronavirus outbreak of global health concern. *Lancet*, 395(10223), 470–473. [https://doi.org/10.1016/S0140-6736\(20\)30185-9](https://doi.org/10.1016/S0140-6736(20)30185-9)
30. Zhu, N., Zhang, D., Wang, W., Li, X., Yang, B., Song, J., Zhao, X., Huang, B., Shi, W., Lu, R., Niu, P., Zhan, F., Ma, X., Wang, D., Xu, W., Wu, G., Gao, G. F., Tan, W., & China Novel Coronavirus Investigating and Research Team (2020). A Novel Coronavirus from Patients with Pneumonia in China, 2019. *The New England journal of medicine*, 382(8), 727–733. <https://doi.org/10.1056/NEJMoa2001017>

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## **CONFLICTS OF INTEREST**

The authors declare no conflict of interest.

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