

COVID – 19 AND SPORTS EVENT

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Abstract

The paper presents the connection between economic development and sport. The objective of the paper is to identify the correlation between income generated by sports and GDP. To confirm this causal relationship the correlation and regression method has been applied. The object of analysis is the impact of the income of English clubs and two Spanish clubs Barcelona and Real Madrid on the GDP of the respective countries, for the last decade. The paper also provides a lot of information on sports developments in the year of the pandemic (2020)

The hypothesis is tested and after $H_1 \neq 0$ it is proved that there is a correlation between the two variables. The regression function for the English and Spanish economies shows that football revenues affect GDP formation

Keywords: Sport, GDP, income, correlation, regression.

1. Introduction

Sport is a major contributor to the economic and social development of any country. It contributes to the health of young people, women, communication among different segments of the population, state revenues, aid to the population in need (many footballers like Ronaldo, Sallah, Ibrahimovic, etc., help the poor), etc. COVID - 19 appeared in Wuhan, China in November 2019 and spread across the globe starting in March 2020. Restrictive measures were taken to prevent the spread of the virus. The sport experienced powerful shocks, first interrupting all its activities, and then resuming but without spectators. For the first time in history, the Olympic and Paralympic Games, which are expected to be held this year, were postponed. Sports clubs affirm and support government austerity measures against pandemic spread

Sport fosters communications and builds bridges of collaboration between communities and generations. Through it, important transformations are realized between different groups of people, creating opportunities to penetrate the marginalized layers.

In the current dire situation of the pandemic FIFA and other sports organizations showed solidarity with the World Health Organization (WHO). The most eminent names of athletes are conveyed the message translated into 13 languages, to implement measures against the spread of KOVID -19. (Washing hands, using a handkerchief when coughing, not touching the face, physical distance, staying home when you feel bad, etc.).

The closure of educational institutions due to COVID-19 reduced sports education which includes a wide range of stakeholders, such as: the business community, teachers, researchers and trainers, parents of their children or grandchildren.

The global spread of COVID-19 resulted in the temporary closure of gyms, stadiums, swimming pools, dance and fitness studios, physiotherapy centres, etc., and as a result many individuals were restricted from actively participating in sports activities. Such developments weakened immunity and exacerbated existing diseases. Based on such possible consequences,

the WHO recommended 150 minutes of moderate-intensity exercise or 75 minutes of vigorous intensity.

Lack of physical activity due to isolation measures can also have effects on mental health. The death of a family member from the virus would worsen the psychological situation even more.

From the above mentioned we can see that the pandemic turns out to have a powerful effect on sports development and on the physical and mental well-being of people. Exactly when the pandemic ends it is not known, although vaccination of the population takes place all over the globe, but at the same time mass infections continue accompanied by isolation measures.

2. Literature review

Economic and sports developments are always at the centre of research and analysis. Both areas are conditioned in between, economic crises hamper economic activity, and prosperity boosts them. The current global crisis has hit almost all sectors, but its sharpening has been felt mostly by sport and its accompanying activities. The pandemic is the deepest global crisis since 1929/33. The global crisis of recent history after the current one is that of 2007/09. It had its source in the US and was a consequence of the failure of financial markets, after the bankruptcy of many US banks due to inter-standard mortgage loans (Petrit, P. 2015, p.160). After the global crisis, numerous scientific papers appeared on sports developments, some of which we present below.

The crisis of 2007/09 reduced the number of fans in stadiums but to negligible measures. Some teams faced financial problems during the economic downturn, but sports services and their institutions managed to isolate this area from negative impacts. (Humphreys, 2010). The global crisis (2007/09) resulted in the bankruptcy of teams, reduction of salaries, reduction of staff administrative, early retirement, etc. (Aughey, T. Danylchik, K. @ Lebel, K. 2011, 4 (1), 147-157)

The importance of national sports policies can't be denied, because the sports economy is maximally globalized, through television broadcasts of major sports events, etc. (Andreff, W. 2008, IV (3), 13-32.)

The effects of changing sport depending on economic developments are also explored by (Inglehart, R, 1997). According to the author, there is a strong link between economics, politics, society and culture. According to him, economic changes in all countries produce systematic changes in society, politics and culture.

3. Sport in the EU

Sport is a very important sector in the EU. This area in terms of contribution to economic development is close to the agriculture, forestry and fisheries sector together. According to official data, the field of sports in the EU participates in the formation of GDP with 2.12% or expressed in absolute numbers, it reaches the value of about 280 billion €, or every 47 €. one of them is formed by this field. (<https://epsi.eu/nws/position-paper-on-the-impact-of-the-covid-19-crisis-on-the-sport-sector/>). Sport with its accompanying activities is an important contributor to the creation of new jobs. In the EU, 5.7 million people are employed in these sectors, which includes 2.7% of total employment, or one in every 37 workers is employed in the field of sports. The value of the sports industry on the globe is estimated at \$ 756 billion a year.

The spread of the pandemic has hit the sport in the EU in a flash and without any warning, resulting in the loss of € 4.5 billion in the first football leagues. The leagues of Europe's six richest leagues face black holes in the budget, while small clubs are on the verge of collapse. The sports and business sectors are deeply concerned about the well-being of people affected

by the pandemic. The EU sports sector makes an important contribution to mitigating the negative effects of the crisis through mechanisms that can contribute to human health, socialization, education, welfare, etc.

The EU pandemic hit all sports actors ranging from coaches, instructors, administrators, volunteers, judges, delegates, to small businesses (fitness clubs, gyms, retailers, event organizers, marketing agencies, equipment manufacturers sports and tenants etc).

European sport mainly relies on a structure of small clubs and associations which play an important role in the mass participation of citizens in sports activities. These small clubs and associations are the backbone of European sport. They are mostly non-profit by nature and without any reservation they often work in unsafe conditions. It mainly employs volunteers and passionate employees. Currently from the action of the pandemic many clubs and associations of this nature have gone bankrupt. Such developments without emergency assistance can have long-term negative consequences in sports and society. <https://epsi.eu/news/position-paper-on-the-impact-of-the-covid-19-crisis-on-the-sport-sector/> Sport and physical activity contribute to making EU societies and citizens more resilient because sports clubs are closely linked to communities of different backgrounds. These associations have an important role to play in mobilizing society to deal with the health threats posed by the pandemic. That is why investing in sports is more important than ever. Failure to organize sports competitions, lack of spectators, trainings and other sporting events can result in deep financial losses.

3.1. Football revenues in the United Kingdom: The UK is regarded as the inventor of the magic game of football, and the English are ardent admirers of the sport. The landscapes of English stadiums during football matches before the pandemic were truly impressive. Such developments make football in the UK a money industry. In the last decade English club revenues have doubled, from \$ 2.1 billion (2011) to \$ 4.1 billion in 2020. In the pre-pandemic season (2019/20) revenues were \$ 1 billion higher. Such developments can be observed from the data in the table below.

Table 1. GDP performance and football revenues over the last decade in the UK (in \$ billion)

Year	GDP	Income from football
2011	2659,3	2.1
2012	2704,8	2.1
2013	2786,1	2.2
2014	2900,1	2.3
2015	2900,1	2.5
2016	2694,3	3.2
2017	2666,2	4.4
2018	2890,1	4.8
2019	2829,1	5.1
2020	2700,1	4.2

Source: <https://economist.com/english-league/>
<https://tradingeconomics.com/united-kingdom/gdp/>

Revenues of English clubs increase their share of GDP from 0.08% in 2011 to 0.2% in 2019 and fall to over 0.1% in 2020, during the pandemic.

Deepest losses were recorded by Manchester United (6 116.4 million) followed by Manchester City (9 109.3 million), Liverpool (2. 102.6 million), Chelsea (2. 102.6 million), Tottenham (.0 91.0 million), Arsenal (. 74.8 million), Leicester 55.6 million £) Brunley (.0 50.0 million) and so on. (HTTPs: // www.statistics / premier- liga)

3.1.1. *Correspondence of football and GDP income in the United Kingdom:* Based on the Premier League revenue performance presented in the preliminary chart and the official GDP performance data for the last decade (2011/20) we will explore the correlation between the two variables in the English economy.

GDP is taken as the dependent variable (y)

Income from Premier League is taken as an independent variable (x)

The most appropriate form to express the interdependence between economic variables is that of parabolic regression, which can be expressed as follows:

$$Y = a + bx$$

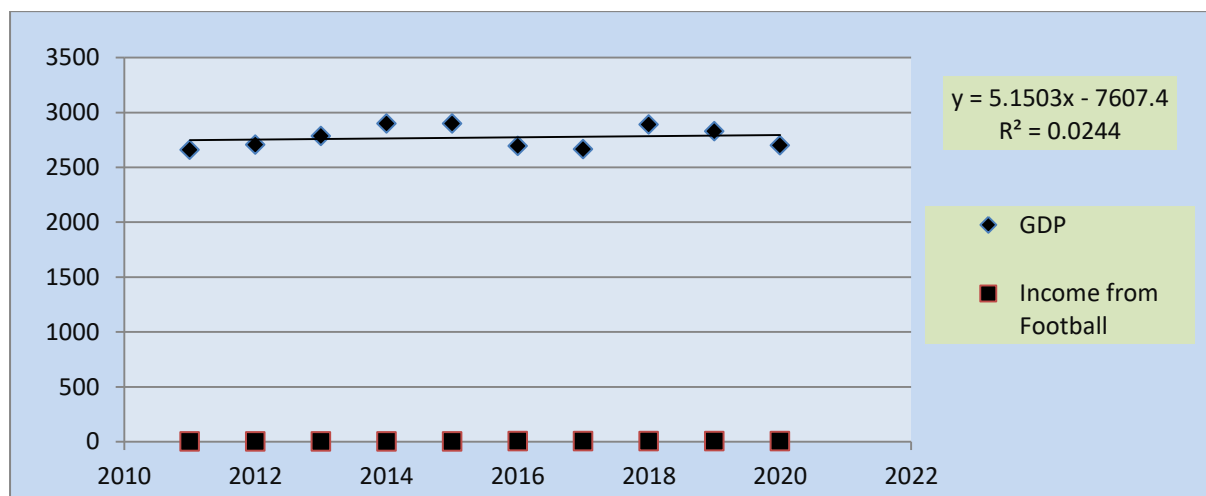
$H_0 = 0$, indicates that the variables between vedi have no correlation,

$H_1 \neq 0$, indicates that there are correlations between the variables

The correlation coefficient of 0.070 shows that there is a negligible relationship between the variables and the GDP of the economy depends on 7% of the football revenue. The statistical test is confirmed which is 0.1988 (>0.05)

The regression function, $Y = 2754.0 + 5.7741X$ shows that every \$ 5.77 increase in football revenue increases UK GDP by \$ 1.

Chart 1. Correlation between the income of both clubs and GDP in UK in the last decade



3.1.2. *Barcelona and Real Madrid football income :* In Spain in the pandemic season (2020/21) from football there have been reduced revenues over \$ 2.4 billion, compared to the previous year 2019/2 (<https://www.sportspromfia.com/la-liga-clubs-covid-19-income-shortfall-losses-revenue-spain-soccer>)

Impressive is the revenue growth of the two biggest clubs Barcelona and Real Madrid. Their income currently accounts for 0.12% of Spanish GDP, which means that for every € 1,000 produced in the Spanish economy, € 1.2 comes from the income of these two clubs. Ten years ago, this figure was 0.80 euros and in 2003 only 0.40 € (<https://www.sportvalue.com.br/en/real-madrid-and-barcelona-economic-impact/>).

Presumptive revenues show the revenues of various items such as revenues from tickets sold, television rights, marketing and other commercial activities.

Barcelona in the first pandemic season (2019/20) has realized the highest income in Spain (840.8 million €), followed by Real Madrid who reached income of 757 million €.

Table 2. GDP performance and revenues from Barcelona and Real in the last decade in Spain, (in \$ million)

Year	PBB	Income from Football
2009	1489,853	773
2010	1423,270	829
2011	1480,985	930
2012	1258,530	997
2013	1355,162	1004
2014	1371,576	1034
2015	119,721	1139
2016	1232,573	1240
2017	1312,089	1323
2018	1420,379	1441
2019	1394,270	1594

Source: <https://countryeconomy.com/gdp/spain>,
[/www.sportvalue.com.br/en/real-madrid-and-barcelona-ecoeconomic-import](http://www.sportvalue.com.br/en/real-madrid-and-barcelona-ecoeconomic-import).

In the pandemic season (2020/21) compared to the previous one, the deepest loss of income was recorded by Barcelona (\$ 125.7 million), while Real Madrid recorded a loss of over \$ 42 million.

3.1.3. Correlation of income Barcelona and Real Madrid and Spain's GDP: From the data of the preliminary chart, we will notice the correlative relationship between the realized incomes and the GDP of the two most powerful Spanish clubs for the last decade (2009/19)

GDP is taken as the dependent variable (y)

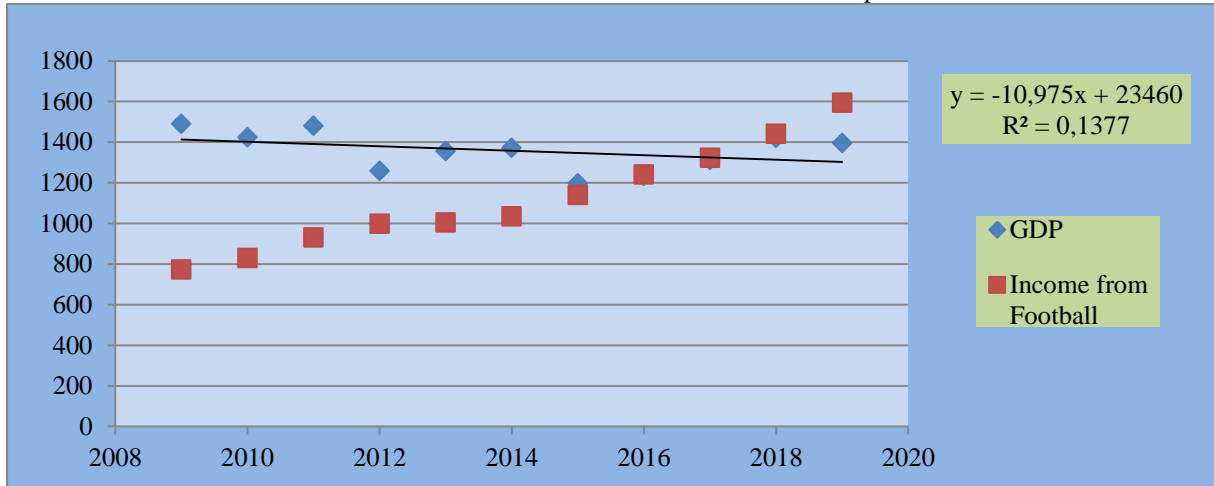
Barcelona and Real Madrid revenues are taken as an independent variable (x)

Through correlation we will determine the power of the linear relationship between the variables. The mathematical form of the regression equation is $Y = a + bx$

Hypothesis $H1 \neq 0$ is tested, when there is a correlation between the variables

If $H0 = 0$ between variables there is no relationship between them

Chart 2. Correlation between the revenue of both clubs and GDP in Spain in the last decade



The regression function $Y = -0.1013 + 1470.9$, shows that the symbolic contraction of football revenues of the two Spanish clubs of \$ 0.10 has increased GDP by \$ 1.

4. Possible action to help sport from crisis

The powerful blows of the pandemic in sports which affects health, physical fitness and immunity force the buyers to help this sector with all the instruments at its disposal.

In this regard, structural funds should be allocated which will support basic sports and all related areas so as not to lose jobs which will result in numerous economic and social problems.

Donations would be needed for sports as well as economic activities such as: businesses, tourism, etc.

Monetary stimulus policies should improve the liquidity of pandemic-stricken clubs and associations.

Just like businesses and clubs in sports associations, innovative programs should be supported to promote sports and physical activity at a time when people are confined to their homes.

Schools and physical education teachers need to be helped to continue training students through digital tools that are effective and safe.

5. Final reviews

The sport suffered powerful blows from the pandemic. Isolation measures against the spread of the pandemic first interrupted sports activities, which resumed later but without the presence of spectators.

The effects of economic crises on sports have been and are in the spotlight of sports experts. Various papers have been presented at scientific conferences and books have been published which prove the strong impact of economic crises on sports. It has been proven that the pandemic hit the sport much more than the crisis of the most recent history that of 2007/09.

Sport also has a strong impact on economic development. The value of sports revenue on the globe is estimated at \$ 756 billion a year. In the EU, sport participates in the formation of GDP with 2.12% (or about € 280 million expressed in absolute numbers). At every 47 € one of them is formed by the sport.

Sports clubs in the EU are closely linked to communities of different backgrounds and make them more flexible.

The UK is the inventor of the magic game of football, the English prefer this catfish and fill the stadiums, so football is a money industry. Revenues of English clubs increased 2.5 times in the last decade, from \$ 2.1 billion in the season (2011/12) to \$ 5.1 billion in the season (2019/20) and as a result of the pandemic fall to \$ 4.1 billion (2020/21). The regression tells us that in English club revenue growth of \$ 5.8 it increases GDP by \$ 1. In the pandemic season (2020/21) compared to the previous season the income from football in England decreased by \$ 1 billion.

In Spain football revenues due to the pandemic in the season (2020/21) compared to the previous season (2019/20) fell by \$ 2.4 billion. The revenues of the two most famous Spanish clubs, those of Barcelona and Real Madrid in the last decade (2009/19) doubled their revenues from \$ 773 million in the 2009/10 season to \$ 1594 million in the season (2019). / 20). In the year of the pandemic Barcelona lost \$ 126 million and Real Madrid lost \$ 40 million.

References

- [1]. Aughey, T. Danylchik, K. @ Lebel, K. 2011, The impact of economic recession on Canadian Interuniversity Sport (CIS) programs. *Journal of Intercollegiate Sport*, 4(1)
- [2]. Andreff, W. 2008. Globalization of the Sports Economy. *Rivista di diritto ed economia dello sport*, IV (3)
- [3]. Humphreys, B. 2010. *The Impact of the Global Financial Crisis on Berlin Heidelberg*: Springer.
- [4]. Inglehart, R. (1997). *Modernization and Postmodernization: Cultural, Economic and Political Change in 43 Countries*. Princeton)
- [5]. Petrit, P. *Makroekonomia*, 2015, ArbëriaDesign, Tetovë
- [6]. Sport in North America. Optimal strategies in sports economics and management. In S. Butenko, J.Gil-Lafuente & P. Pardalos (Eds.), *Optimal Strategies in Sports Economics and Management*
- [7]. <https://epsi.eu/news/position-paper-on-the-impact-of-the-covid-19-crisis-on-the-sport-sector/>
- [8]. <https://economist.com/>
- [9]. <https://tradingeconomics.com/united-kingdom/gdp/>
- [10]. <https://www.statistics/premier-liga>
- [11]. <https://countryeconomy.com/gdp/spain>
- [12]. <https://www.sportspromedia.com/news/la-liga-clubs-covid-19-income-shortfall-losses-revenue-spain-soccer>
- [13]. <https://www.sportvalue.com.br/en/real-madrid-and-barcelona-economic-impact/>