THE COVID-19 GLOBAL PANDEMIC AND ITS IMPACT ON THE EU SPORTS INDUSTRY AS A PART OF ENTREPRENEURSHIP ENVIRONMENT

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Abstract

This scientific paper brought insights into the effects of the Covid-19 on specific and important part of the EU economy – the sports industry. The main objective of the research made was to identify and quantify the possible impact of the Covid-19 global pandemic on the EU sports industry. There are no doubts that this pandemic has had a significant impact on the world economy and also on the economies of the individual countries. This scientific article connects already published articles, which were focusing on the impacts of the Covid-19 on the global or local economies and their specific industries with the analysis of the impact on the sports industry in the European Union which have not been sufficiently investigated yet. Purpose of the article was to identify and quantify the impact of the Covid-19 waves and restrictions (that have been held against the spread of The Covid-19) on the sports industry in the EU and its individual countries. This paper also seeks to present possible solutions how the EU sports industry could possibly restore its pre-pandemic state. Mainly the empirical, exploratory, comparative and statistical methods of examining secondary data which are connected with the selected macroeconomic indicators (f. e. the industry outputs, state of employment in the selected time period) were used. The most important finding is that the Covid-19 pandemic has had significant impact on the EU sports industry.

Keywords: covid-19 pandemic; impact; sport; sports industry

JEL Classification: E23; E24; O11

1.Introduction

Sport is a term referring not only to a physical activity but also to a scientific discipline, an economic sector and many others. It is thus a concept with a multidisciplinary overlap. The origin of the word sport derives from the Latin disportare, which can be loosely translated as "to have fun", with sport itself representing a polyfunctional social phenomenon. According to the Study on the economic impact of sport through sport satellite accounts, conducted by the European Commission in 2018, sport accounts for up to 2.12% of GDP and 2.72% of total employment in the European Union.

Given the considerable impact of sport on macroeconomic indicators, the attractiveness of sport itself for the masses of the population and its multidisciplinary overlap, sport and its impacts on society are gradually becoming a subject of interest and subsequent research in several scientific disciplines, including economics. However, sport and its economic impacts are still an under-researched area. Fitzel (2006) argues that sport economics in particular is becoming an increasingly attractive and respected field, with a strong professional interest in the outputs of the field.

In March 2020, the World Health Organization declared the COVID-19 coronavirus a pandemic. The COVID-19 pandemic has brought with it significant societal changes globally, and has had and continues to have an impact not only on human lives but also on national economies. Golubeva (2021) segments the impacts of the pandemic on society and its various components, including the economy. Kraus et al. (2020) highlights the uncertainty caused by the pandemic as a common feature across economic sectors. Petkoska, Klisaroski, Elezi, and Kostoska (2021), in a study examining the impact of the pandemic on organizational performance, find that COVID-19 had an immediate, often devastating impact on organizations and companies, and in many cases their original performance has not been restored to this day.

There are currently publications dealing with the impact of the pandemic on sport, but these are scholarly works that do not focus on identifying the impact of the pandemic and the restrictions that the pandemic has brought on sport as part of the business environment and economic sector of the economy. These are scientific articles examining the impact of the COVID-19 coronavirus on sport from the point of view of the organisation of sport as such (sporting events, sporting activity, sporting legislation, etc.), or examining the impact of the pandemic on individual national economies.

The ambition of the authors of this article is to identify and quantify the impact of the pandemic on the economic sector of sport from a macroeconomic perspective within the economy and business environment of the European

Union. At the same time, this article links previously published scientific articles focusing on the causes and their linkages to the global and local economic impacts of the pandemic.

2. Literature overview - sport as an economic sector in the business environment and the economic impact of the pandemic

Sport is a rather broad concept with the already mentioned multidisciplinary scope. Novotný et al. (2011) distinguish between 2 main levels of sport, namely sport with active and passive participation of participants, while within sport with active participation, institutionalized/organized sport and non-institutionalized/non-organized sport.

Non-institutionalised sport consists of loose groups or individuals who play sport independently and finance these activities from their own resources (so-called household expenditure). For example, an individual decides to improve his/her fitness in a fitness centre or a group of work colleagues take part in a "teambuilding" activity, where they go hiking, etc. Ahlert (2013) reports that household expenditures account for the largest share of the GDP value from sports.

One of the basic parts of the subsystem of institutionalized sport is school sport - it is a part of the educational process in primary, secondary and possibly also higher education institutions. The second component is sport organised in an association/community manner, which is made up of amateur and professional competitions, and in which active participants (athletes, sports professionals such as referees, coaches, sports officials, etc.) are brought together within sports organisations (sports clubs, sports associations, etc.).

Kučera and Fil'a (2021) consider this component to be the driving force of the sports industry as it is the most socially and media observed, owing to the sports contests themselves and the well-known sportsmen competing at the professional level. As an example of the impact of the sports economic sector, the following are examples of goods/services serving the needs of organised sport:

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- Manufacture of sporting goods (clothing, sporting goods and equipment, etc.);
- Manufacture of food supplements;
- Construction and services of sports infrastructure (sports grounds, etc.);

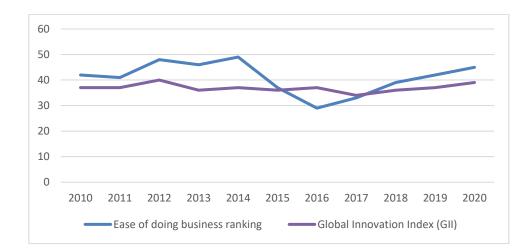
- Services of sports professionals (coaches, player managers, etc.);
- Sale of licenses and rights (marketing rights, broadcasting rights, athlete transfers, etc.).

The passive component of sport is individuals/groups, where we mainly include sports fans. As an example of the impact of the sports industry, the following are examples of goods/services serving the needs of non-organised sport:

- Manufacture of sporting goods and souvenirs (clothing, sporting goods and souvenirs);
- Additional services of sports infrastructure (refreshment sales, etc.);
- Sale of admission fees (tickets for matches, fees for sports TV channels, etc.).

Butoracová Šindleryová and Morovská (2009) perceive the entrepreneurial environment in the broadest sense of the word as a reflection of the quality of economic conditions and prerequisites for the economic activity of business entities. Smriti (2018) presents the view that the entrepreneurial environment is created by the totality of conditions that surround people in a particular space and time. Klamová (2018) argues that a good or conducive business environment can be defined as an environment that creates a level playing field for all.

Demjanová (2010), when measuring the development of the business environment, draws attention in particular to the choice of appropriate indicators for the identification of development and subsequent comparison of individual economies. Kuzmishin (2009) states that the measurement of the quality of the business environment is expressed in several indices with different construction, different types of data and different variables.

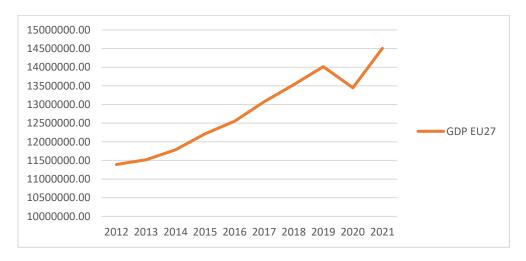




Source: made by the authors according to WorldBank & GII, 2022

In measuring the impact of the sports economic sector, sports satellite accounts are mainly used globally. Andreff and Szymanski (2006) characterise satellite accounts as a set of national statistical reporting techniques that cover a specific area, noting that some of the earliest satellite accounts in the field of sport originated in France and Germany. Thus, the sport satellite accounts represent a certain standardised approach in the compilation and subsequent evaluation of selected indicators, allowing to measure the impact of sport on the economy, in particular the share of sport in the gross domestic product, the share in employment and total expenditure. Shoji et al. (2018) view satellite accounts as a defined aggregate set of goods and services from the sport sector, but one that needs to take into account the specificities of national economies.

The basic indicator of economic growth and development of an economy or economic sector is the GDP indicator and its derivatives. Klima (2006) sees economic growth as an increase in real potential output over time, expressed as a change in flow variables such as GDP and GNP. Burda and Wyplosz (2009) give a simplified 3 main reasons for economic growth - productivity growth, population growth and technological progress.



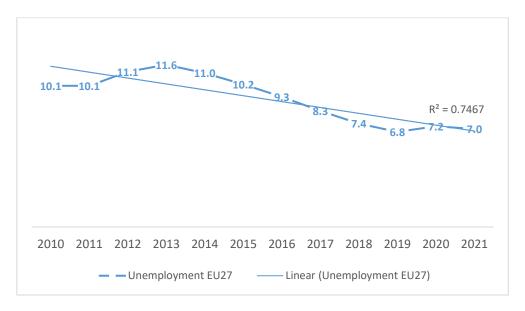


Source: made by the authors according to EUROSTAT database, 2022

Figure 2 shows the evolution of the GDP of the 27 countries of the European Union, and we can observe a significant decline in this indicator for 2020.

Employment is another in a series of important macroeconomic indicators that we have chosen to identify the potential impact of a pandemic on the sports economic sector. In their monograph focusing on a cross-section of the history of economic theories, Holman et al. (2005) present the macroeconomic indicator of employment as an

essential part of each of the economic theories. This is an indicator directly related to one of the basic factors of production, which is labour. Abel, Bernanke and Crushore (2008) link employment developments, including unemployment, directly to developments in the demand for goods and services where there is a positive correlation. Horeháj, Považanová and Šuplata (2018) consider the liberalisation of international economic relations as one of the fundamental drivers of globalisation. A typical example of such liberalisation is the free movement of goods, services and, in our case in particular, labour capital within the European Union. The table below shows the evolution of total unemployment across the EU-27, with a slight increase in the number of unemployed in 2020.





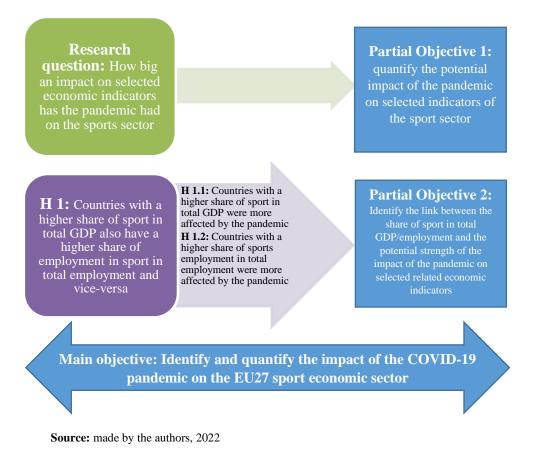
Source: made by the authors according to EUROSTAT database, 2022

The economic impact of the pandemic has been studied quite exhaustively by a number of authors so far. Belaid and Creti (2022) looked at the economic impact of the pandemic on the energy sector and the potential impact on climate change. Al-Baidhani (2021) quantified the impacts of the pandemic on emerging markets in his study. Kesavaraj (2020) examined the impact of the pandemic from a national economy perspective, including a case study from India. Lu and Lin (2021) as well as Golubová (2021) pointed out the negative economic impacts of the pandemic and their societal impacts. Petkoska, Klisaroski, Elezi, and Kostoska (2021) investigated the impact of covid on the performance of organizations from a microeconomics perspective. Fisterová (2020) developed an analysis of the impact of the restrictions on the sports sector in the context of the Slovak Republic in order to prevent the spread of the pandemic, which showed in particular a significant threat to the existence of sports clubs. In principle, all foreign authors agree that the pandemic, or the restrictions imposed by individual countries, had a significant impact on national economies, which in turn brought about a global slowdown in economic growth. However, the identification and quantification of the impact of the pandemic on the sports economic sector within the European Union countries has not yet been sufficiently explored.

3. Research methodology

The potential impact of the pandemic will be identified and quantified across the EU-27 in the following indicators: number of people employed in the sports sector, turnover from the production of sports commodities (in millions of EUR), the number of companies producing sporting goods. Any changes in the observation period before and during the pandemic will be compared with the indicators: % share of sport in total GDP, % share of sport in total employment. For the analytical part of the article, secondary data available mainly from the EUROSTAT database and the Study on the economic impact of sport through sport satellite accounts are used.

Diagram 1 Set of partial objectives, research questions and hypotheses



The object of investigation is the aforementioned indicators of the sports economic sector. The possible impact of the pandemic on the economic indicators of the sports sector in the EU-27 is examined.

Empirical exploratory, comparative and statistical methods of secondary data examination are used to meet the partial objectives and the main objective. The basis is a comparison of the evolution of selected indicators of the economic sector of sport before and during the pandemic with quantification of the impact. In our case, linear regression analysis examines the possible relationship between two variables, where we assume that the value of the dependent variable is affected by a change in the value of the independent variable, namely:

- 1. Hypothesis 1 a change in the share of sport in total GDP implies a change in the share of employment in sport in total employment and vice-versa.
- 2. Hypothesis 1.1 A higher % share of sport in a country's total GDP implied a % higher loss of economic output from sport after a pandemic outbreak.
- 3. Hypothesis 1.2 a higher % share of sport in total employment in a country implied a % higher loss of employment in the sport sector after the pandemic.

The linear regression analysis formula for the analytical part is as follows (b0 is the point where the regression line intersects the Y-axis, b1 is the regression coefficient that determines the direction of the line, e is the measurement error):

$$Y = b0 + b1^* X + e$$
 (Eq.1)

4. Analytical outputs

To answer the first research question, we have chosen a set of the following indicators of the sports economic sector in the period of years before and during the COVID-19 pan-European group of 27 EU countries: employment in the sports sector, turnover from the production of sporting goods, number of enterprises producing sporting goods.

On the next page we have Figure 4 showing the number of employees in the sports sector, and we can observe a decrease of 59 thousand employees. this represents a decrease of 4.5% compared to 2019. Over the 2012-2021 period, we can observe a continuous growth in the number of staff up to 2020, with a trend back to the pre-pandemic level of staffing in sport in 2021.

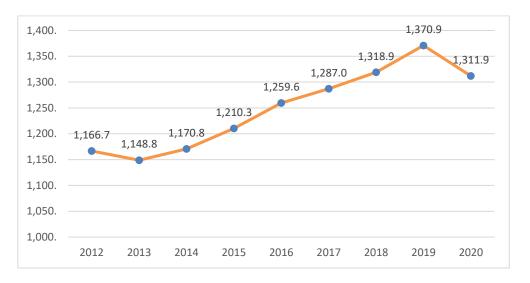
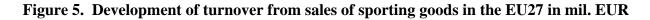
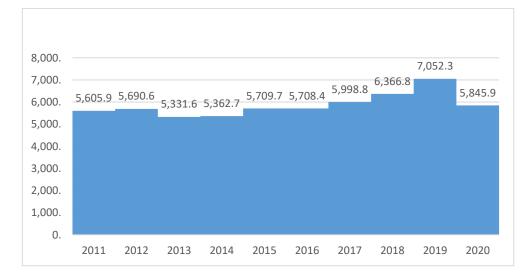


Figure 4 Evolution of the number of employees in the sports sector in the EU27

Source: made by the authors according to EUROSTAT database, 2022

In Figure 5 we have shown the value of turnover from the sale of sporting goods in million. In the EU27, we can observe a significant decrease in turnover in 2020, which was 20.64% lower than in 2019. Similarly, in Figure 6 we can observe a decline in the number of businesses producing sporting goods, specifically the number of businesses declined by 7.4% (313 businesses) in 2020 compared to 2019.

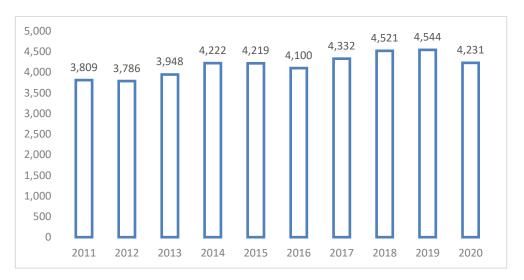




Source: made by the authors according to EUROSTAT database, 2022

In all selected indicators of the sports economic sector, we can observe a significant decline in 2020 compared to the previous year.

In Figure 7 we have the output of the linear regression analysis, which confirms Hypothesis 1, namely that the share of the sports sector in the total GDP of the EU27 countries has an impact on the share of the number of persons employed in sport in the total number of persons employed in the EU27 and vice-versa, with a strong linear dependence and positive correlation between the two variables.





Source: made by the authors according to EUROSTAT database, 2022

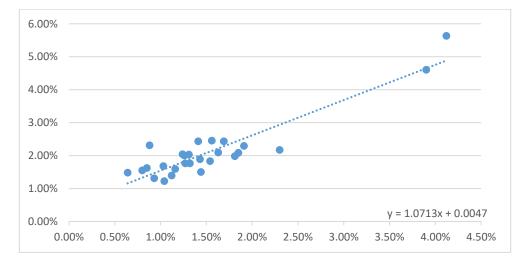


Figure 7. Output of the linear regression analysis

Source: Own elaboration

Relationship share of emplo sports sector an the sports sector	oyment in the ad the share of	Relationship between the share of employment in the sport sector and the change in the number of employees in sport	Relationship between the share of sport in total GDP and the change in turnover of the sport sector
Multiple R	0.918265742	0.042622486	0.344111526
R Square	0.843211973	0.001816676	0.118412743
Adjusted R Square	0.836940452	-0.038110657	0.072013413
Standard Error	0.003808519	22.99094059	19.24933022
Observations	27	27	21

Table 1. Outputs of linear regression analysis of selected indicators

Table 1 above shows us the outputs of the linear regression analysis, and based on the outputs we can conclude that the aforementioned correctness of Hypothesis 1 has been proven, and thus the change in the share of the sports sector of the total GDP in a given country has an impact on the changes in the share of the sports sector of total employment, and there is a positive correlation between the variables (a larger share of the total GDP means a larger share of employment in sports).

Hypotheses 1.1 and 1.2 could not be confirmed; there is too weak a linear dependence between the indicators. Thus, countries with a higher share of employment in sport did not experience a larger % decline in the number of people employed, nor did the higher share of sport in total GDP mean that the pandemic caused a larger decline in turnover from the sale of sporting goods in countries with a higher share of the sport sector in total GDP.

5.Conclusion and discussion

Based on the results of the analytical part, we can conclude that the impact of the pandemic or anti-pandemic measures on the sports sector was significant in the EU-27. The present output is consistent with the findings of other authors who have focused on the impact of pandemics and anti-pandemic measures on other economic sectors, global economic systems, or societal impacts - e.g., Petkoska, Klisaroski, Elezi and Kostoska (2021), Golubová (2021), and other authors.

The share of the sports sector in total employment or the share in total GDP in the EU-27 did not affect the intensity of the impact of the pandemic on selected economic indicators of the sports sector. Fisterová (2020), in a case-study of the impact of pandemic measures on sports clubs in the Slovak Republic, points to the intensity of antipandemic measures affecting the sports sector (e.g. banning the organisation of sports matches, etc.) as a significant factor threatening the functioning of the sports sector.

In addition to the intensity of anti-pandemic measures, which varied across EU countries, it is also important to note that the sports sector itself and its impact on the overall GDP or employment of countries is not dependent on the production of sport goods/services and the resulting economic outputs alone. The sports economic sector cannot be limited to manufacturing/service businesses in the area. Andreff and Szymanski (2006) or Downward, Dawson and Dejonghe (2009) point to the complexity of sport and its interconnectedness with other economic sectors. Sports organisations (e.g. sports associations and clubs) in the non-profit sector also play an important role in the creation of jobs or the production of sports-related goods and services.

Currently, the necessary data from the relevant statistical databases for 2021 and 2022 are not yet available to responsibly assess how much the lifting of anti-pandemic measures that occurred after the weakening of the COVID-19 coronavirus has contributed to the improvement of the indicators of the sports economic sector. Salis et al. (2021) confirmed in their research that athletically inactive persons had a worse course of coronavirus disease. Knudsten, Thomasen and Andersen (2020) have shown that the chance of transmission of the virus during football matches is very low.

Regular sporting activity of persons, especially that which is conducted in low contact/open spaces, is desirable in the prevention of severe viral diseases and should not be particularly restricted by anti-pandemic measures. It can therefore be assumed that as long as the sporting activity of the population is not restricted, the sports economic sector will not be affected to the same extent as it was in 2020 after the outbreak of the COVID-19 pandemic and the related anti-pandemic measures, which significantly affected individual national economies and their economic sectors, including the sports sector.

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References

- ABEL, A. B., BERNANKE, B. S. CROUSHORE, D., (2008). Macroeconomics. 6th edition., Boston: Pearson, 641 p., ISBN: 978-0-321-46948-9.
- AL-BAIDHANI, A. (2021). COVID-19 Economic Impact on Developed and Developing Economies. In: The International Founding Conference on Solidarity, Social Economy and Sustainable Development, available at: https://ssrn.com/abstract=3700352, http://dx.doi.org/10.2139/ssrn.3700352.
- AHLERT, G. (2013). The German Sport Satellite Account (SSA). In: GWS Discussion Paper, No. 04/2014, Osnabruck: Gesellschaft f
 ür Wirtschaftliche Strukturforschung mbH, pp. 1-19, ISSN 1867-7290.
- ANDREFF, W. SZYMANSKI, S. (2006). Handbook on the Economics of Sport. 1st edition., Chettenham: Edward Elgar, 830 p., ISBN: 978-1843766087.
- BURDA, M. VYPLOSZ, CH. (2009). Macroeconomics a European text. 5th edition, Oxford: Oxford University Press, 543 p., ISBN: 978-0-19-923682-4.
- 6) BUTORACOVÁ ŠINDLERYOVÁ, I. MOROVSKÁ, I. (2009). Podnikateľské prostredie v Slovenskej republike z pohľadu inovačných príležitostí a bariér regionálneho rozvoja. In: *Zborník vedeckých prác katedry ekonómie a ekonomiky*. ANNO 2009. p. 27-44. ISBN 978-80-555-0005-8.
- 7) DEMJANOVÁ, L. (2010). Konkurencieschopnosť SR v rámci krajín V4 vzhľadom na vývoj podnikateľského prostredia a inovačnej aktivity podnikov. In: NÁRODNÁ A REGIONÁLNA EKONOMIKA VIII Herľany, 13 15. Október 2010. Zborník príspevkov z vedeckej konferencie. pp. 193-203, ISBN 978-80-553-0517-2.
- DOWNWARD, P. DAWSON, A. DEJONGHE, T. (2009). Sport Economics. 1st edition, Abingdon-on-Thames: Routledge, 440 p., ISBN: 978-0-7506-8354-8.
- EUROPEAN COMMISION (2018). Study on the economic impact of sport through sport satellite accounts, Luxembourg: Publications Office of the European Union, 110 p., ISBN: 978-92-79-76925-2, available at: <u>https://op.europa.eu/s/n60H</u>.
- 10) EUROSTAT (2022). Macroeconomical statistics, available at: https://ec.europa.eu/eurostat.
- 11) FISTEROVÁ, A. (2020). COVID-19 a šport: Analýza vplyvu mimoriadnej situácie na čerpanie verejných prostriedkov poskytnutých národným športovým organizáciám a národným športovým zväzom v Slovenskej republike, available at: https://docs.google.com/document/d/1tLhk8HUrclbPjixu0sH2BFg-SW3FZLJ5q4N9qH120aQ/edit?usp=drive_web&ouid=105023581943543767998.
- 12) FITZEL, J. (2006). Handbook of Sports Economics Research. 1st edition., New York: Routledge., 288 p., ISBN: 978-0-7656-1594-7.
- 13) GOLUBEVA, O. (2021). Firms' performance during the COVID-19 outbreak: international evidence from 13 countries. In: Corporate Governance, Vol. 21 No. 6, pp. 1011-1027, <u>https://doi.org/10.1108/CG-09-2020-0405</u>.

- 14) HOLMAN, R. et al. (2005). Dějiny ekonomického myšlení. 3rd edition, Praha: C. H. Beck, 539 p., ISBN: 80-7179-380-9.
- 15) HOREHÁJ, J. POVAŽANOVÁ, M. ŠUPLATA, M. (2018). Medzinárodné ekonomické vzťahy. 1st edition, Banská Bystrica: Belianum, 188 p., ISBN: 978-80-557-1425-7.
- KESAVARAJ, G. (2020). COVID-19 ECONOMIC IMPACT IN INDIA. In: Journal of Xi'an University of Architecture & Technology, Vol. XII, Issue VIII, pp. 614-628, ISSN: 1006-7930.
- 17) KLAMOVÁ, S. (2018). Podnikateľské prostredie v EÚ. Ekonomický ústav SAV, available at: <u>http://www.ekonom.sav.sk/sk/podujatia/podnikatelske-prostredie-v-eu</u>.
- 18) KLÍMA, J. (2006). Makroekonomie. 1. vyd., Praha: Alfa Publishing a.s., 144 s., ISBN: 80-86851-27-3.
- KNUDSEN, N. S. THOMASEN, M. M. ANDERSEN, T. B. (2020). Spread of virus during soccer matches. In: medRxiv preprint, <u>https://doi.org/10.1101/2020.04.26.20080614</u>.
- 20) KRAUS, S. CLAUSS, T. BREIER, M. GAST, J. ZARDINI, A. TIBERIUS, V. (2020). The economics of Covid 19: initial empirical evidence on how family firms in five Europea countriescope with the corona crisis. International journal of entrepreneurial behaviour and research, Vol 26, pp. 1067-1092, <u>https://doi.org/10.1108/IJEBR-04-2020-0214</u>.
- 21) KUČERA, J. FIĽA, M. (2021). Business Environment and The Performance of The Sports Industry in Relation to The Population Physical Activity of The EU, In: Journal of Business, International Black Sea University, Vol 10, Issue 1, pp. 31 – 42, ISSN: 2346-8297.
- 22) KUZMIŠIN, P. (2009). Kvalita podnikateľského prostredia a jej vplyv na konkurencieschopnosť podniku. In: Journal of Competitivenes. 1/2009. p. 42-55. ISSN 1804-171X.
- 23) LU., X. LIN, Z. (2021). COVID-19, Economic Impact, Mental Health, and Coping Behaviors: A Conceptual Framework and Future Research Directions. In: Frontiers in Psychology, Vol. 12, <u>https://doi.org/10.3389/fpsyg.2021.759974</u>.
- 24) NOVOTNÝ, J. et al. (2011). Sport v ekonomice. 1st edition. Praha: Wolters Kluwer ČR, 512 p., ISBN: 978-80-7357-666-0.
- 25) PETKOSKA, M. M. KLISAROSKI, M. B. ELEZI, S. KOSTOSKA, O. (2021). Impact of COVID-19 Outbreak On Organizational Performance: Evidence from North Macedonia, Istanbul: XVI. IBANESS Congress Series on Economics, Business and Management proceedings, 116 – 121 p., ISBN: 978-619-203-308-8.
- 26) SALLIS, R. YOUNG, D. R. TARTOF, S. Y. SALLIS, J. F. SALL, J. LI, Q. SMITH, G. S. COHEN, D. A. (2021). Physical inactivity is associated with a higher risk for severe COVID-19 outcomes: a study in 48 440 adult patients. In: British Journal of Sports Medicine, 55:1099-1105, available at: <u>https://bjsm.bmj.com/content/55/19/1099.info</u>.
- 27) SHOJI, H. et al. (2018). Construction of a Sport Satellite Account in Japan, Version 2: Focusing on the Difference between Japan and the EU Regarding Economic Statistics and the Structure of Definition of the Sport Industry. In: Journal of Japan Society of Sports Industry, Vol.28, No 3/2018, Tokyo: Japan Society of Sport Industry p. 257-264, ISSN : 1884-2534.
- 28) SMRITI, CH. (2018). Business Environment: Nature and Significances of Business Environment, available at: <u>http://www.yourarticlelibrary.com/business/business-environment-nature-and-significances-of-business-environment/23367</u>.