

The Impact of the COVID-19 Pandemic on Czech Gaming Brands

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Abstract: The COVID-19 pandemic has led to an unprecedented situation with an enormous impact, particularly in the health sector, but also a significant negative impact on the global economy. At the start of the COVID-19 pandemic, most financial markets collapsed but not all industries suffered equally. The gaming industry was one of the least affected areas. The COVID-19 pandemic affected lives in many ways, including how people chose to spend their leisure time and how they coped with the unprecedented circumstances. In the first half of 2020, several billion people were forced to stay cooped up in their homes, under stress, anxiety, and in boredom, and it is these realities that have taken a toll on gaming companies. The Czech gaming industry has been thriving recently, but the impact of the COVID-19 pandemic on Czech companies has not yet been quantified. The goal of the research is to examine in more detail the impact of the first wave of the COVID-19 pandemic on Czech companies operating in the gaming industry, both from the financial and user perspective. The research is based on an analysis of the revenue of brands in the Czech gaming industry and the trend in the number of users. The paper concludes with a summary of the results obtained and a discussion of the possible causes.

Keywords: COVID-19; Czech game industry; gaming brands; social networks

JEL Classification: M15; F65; M31

1. Introduction

The first wave of the COVID-19 pandemic forced governments around the world to restrict population mobility and enforce social distance to limit or completely stop the spread of a new and previously unknown virus (Anderson et al., 2020; Wilder-Smith et al., 2020). As of March 2020, more than one billion people have been trapped in their homes for several weeks. Very strict quarantine measures were imposed in many countries, travel was restricted, social and cultural events were canceled, and public services were closed. The health, economic, and social consequences of the COVID-19 pandemic were enormous. While it was not the first time a viral disease had affected a human population, the COVID-19 pandemic had an unprecedented global reach. The situation regarding the COVID-19 pandemic also deteriorated significantly again in late 2021, when the more contagious omicron variant began to spread. By early 2022, continental Europe in particular was facing another wave of COVID-19. By March, most countries were seeing record numbers of infections, but fewer people were admitted to hospitals and there were fewer casualties. This

is also why most countries have started to phase out strict measures and are returning to their pre-pandemic way of life (López-Cabarcos et al., 2020).

Due to very strict anti-epidemic measures and frequent closures, people were looking for ways to spend time in isolation. Preventive measures against the spread of the coronavirus raised the bar for movie and music consumption. Many people turned to the virtual world of video games. People suddenly had more free time, irregular daily routines, and children were learning online. Due to these factors, the gaming industry experienced record success. Thus, it can be said that the already very successful gaming industry had its best years in a decade thanks to the COVID-19 pandemic.

In the Czech Republic, the gaming industry was one of the few industries that were not affected by the coronavirus pandemic. Czech gaming brands have been thriving for a long time. Annual turnover is around five to six billion crowns (EU2022.CZ, 2022). In 2020, gaming companies were relatively prosperous and the whole sector was growing. The turnover increased by 17% compared to 2019 and the total number of people working in game development companies reached over 2,000 (Langerová, 2021). In 2021, turnover even increased by 33% (GDA, 2021). The growth of turnover in the game industry is expected to continue in 2022. According to GDA (2021), the turnover of Czech game companies is expected to increase by 6% in 2022 (Jarůšek, 2022). There are more than 135 gaming companies operating in the Czech Republic.

The aim of the presented research is to examine in more detail the impact of the first wave of the COVID-19 pandemic on Czech companies operating in the gaming industry, both from the financial and user perspective. The first wave of the COVID-19 pandemic is defined by the period from March to May 2020, when some of the most stringent restrictions were introduced in the Czech Republic. The research is based on the analysis of secondary data of a financial nature on individual gaming brands operating in the Czech gaming industry. Furthermore, the research is based on primary data collection conducted from November to December 2022. The aim of the primary research was to test the assumption of increased interest in video games during the first wave of the COVID-19 pandemic among Czech students. Primary data was collected through a questionnaire survey conducted among 394 students of the Faculty of Economics, Technical University of Liberec (hereinafter TUL). As a result, 151 responses were collected using the Survio service.

2. Theoretical Background

The new type of coronavirus was first identified in December 2019 in Wuhan, China. On 11 March 2020, the World Health Organization declared a global pandemic of the so-called COVID-19 disease. At the same time, countries around the world began to implement various measures to stop the spread of this new disease. The measures taken have had a significant impact on all social developments. Educational institutions, restaurants, and cultural and entertainment venues (cinemas, theatres, sports stadiums, etc.) were closed. To prevent the spread of the coronavirus, the wearing of surgical masks, physical distance, mass testing, contact monitoring, quarantine, and isolation were introduced. Governments in many countries have introduced the concept of "social distancing" in society. Social distancing has

greatly restricted the free movement of people and on the other hand, has forced people to stay largely at home. Large numbers of people were ordered to quarantine or isolate themselves.

Government action and media pressure have caused many people to feel stressed, anxious, and depressed. People who were forced to stay at home for various reasons had to find other activities to escape the enormous stress load. These psychological factors have been reflected in the increased use of information and communication technologies. Due to all the governmental measures and restrictions, video games have become a good option to cope with isolation (Ko & Yen, 2020). According to Shanley (2020), the US telecommunication service provider Verizon has seen a 75% increase in online gaming activities. Stephen (2020) also adds that Steam reported more than 20 million users, the highest number of active users in its history. According to SuperData, the global games market was worth \$139.9 billion in 2020, with the games industry growing by 12% year-on-year (VentureBeat, 2022). According to a report by US research company NPD Group (2022), the number of gamers in the US increased significantly in 2020. According to the research, four out of every five US consumers have played a video game since the start of the COVID-19 pandemic. The NPD Group (2022) adds that time spent playing video games increased during the COVID-19 pandemic. The research found that 35% of gamers increased their time spent playing compared to the previous period. Research by Barr and Copeland-Stewart (2022) confirmed that 71.3% of respondents spent much more time playing video games during the COVID-19 pandemic. Furthermore, the research found that 63.1% of respondents changed the types of games they played. Barr and Copeland-Stewart (2022) add that about 10.5% of respondents played video games several times a day before the COVID-19 pandemic, while more than 40% of respondents played video games several times a day during the COVID-19 pandemic.

Şener and Yalçın (2021) found that there was a significant increase in the number of active players during the COVID-19 pandemic. They further found through research that large companies in the gaming industry increased the value of their holdings and subsequently confirmed this hypothesis through statistical testing. They further concluded that during the pandemic period, the demand for video games increased and the share prices of gaming companies rose.

3. Methodology

The aim of the presented research is to examine the impact of the first wave of the COVID-19 pandemic on Czech gaming companies from an economic and user perspective. The research process can be divided into the following four steps.

Step 1: Create a list of companies to be evaluated and collect financial statements. The research focused on the period 2018-2020 due to the availability of financial statements. Corporate data for 2021 is not yet available for a significant proportion of businesses. The most well-known Czech gaming companies were included in the research. These companies are: Bohemia Interactive Studio, SCS Software, Warhorse Studios, 2K Czech, Amanita Design, Madfinger Games, Geewa, Grip Digital, Beat Games, Cenega Czech, Cinemax, DynamicDust, Gammosaur, McMagic Productions a Wargaming Prague (Ministry of Finance, 2022).

For the gaming companies mentioned above, it was necessary to obtain the necessary data from the financial statements, in particular the balance sheet and the income statement for the years 2018-2020. The obstacle to this step is that not all companies comply with the obligation to disclose selected data in the collection of documents. The commercial database MagnusWeb (Bisnode, 2022) was used as the main source of accounting data. If this database did not contain the required financial statements, the public (or commercial) register and the collection of deeds in the commercial register were used as a second source. The collection of documents contained the missing financial statements.

Step 2: Calculation of financial performance indicators. For the above-mentioned gaming companies, the selected ratios were then calculated. These ratios should give a basic overview of the financial situation of gaming firms. The first ratio selected was the return on equity ROE (see relationship 1). ROE is one of the basic ratios that provides an overview of the overall return on equity. The second ratio was ROA (see relationship 2). This ratio measures how profitable a firm is in relation to its total assets. A high ROA means that management is effectively using the company's assets to generate profits. The third indicator was ROS. The ROS (see relationship 3) expresses how much profit is left for the company from the sales earned. Earning after tax (further EAT) was used to calculate the above ratios.

$$ROE = EAT/Equity \quad (1)$$

$$ROA = EAT/Assets \quad (2)$$

$$ROS = EAT/Sales \quad (3)$$

Step 3: Comparison of financial characteristics in individual years. In this step, the differences between the median values of the above-mentioned characteristics in the years 2018-2020 were compared using the non-parametric Mann-Whitney-Wilcoxon W test. The Mann-Whitney-Wilcoxon W test was chosen because the Shapiro-Wilk test showed that at least one of the indicators under study did not have a normal distribution. Mann-Whitney-Wilcoxon W test is a non-parametric variant of the test of the identity of the means of two independent random sets (x_1, x_2, \dots, x_n) and (y_1, y_2, \dots, y_m) with a different number of elements. The null hypothesis states that the data samples have identical means (medians). The alternative hypothesis states that the data samples do not have identical means (medians). The test statistic to assess the normality of the data is the W statistic, which is defined as:

$$W = \frac{R^+ - \frac{1}{2}n_x n_y}{\sqrt{\frac{n_x n_y}{12}(n_x + n_y + 1)}} \quad (4)$$

where R^+ is the smaller sum of the sequence numbers. If $|w| > W_\alpha$ i.e. the critical value of the $N(0; 1)$ distribution, we reject the null hypothesis of agreement of trait values at a given significance level. This means that the difference between the pair of means (medians) is statistically significant. STATGRAPHICS Centurion XVIII software was used to test the hypotheses and all tests were performed at $\alpha = 5\%$ significance level.

Step 4: Create a questionnaire. The aim of this research was also to analyze data collected from young people who are most likely to be the main users in the Czech gaming industry. According to the CZSO survey (2018), approximately 68% of 16-24 years old people play computer games. This survey further adds that the frequency of playing computer games dropped to half for the 25-34 age group and further decreased as the population aged (CZSO, 2022). In order to determine the impact of the COVID-19 pandemic on users' interest in video games, a questionnaire survey was conducted among students at a selected university. The respondents of the survey were first-year undergraduate students of the Faculty of Economics at the TUL. The collected data were anonymized, and the results were presented in a summary form. The survey was conducted from November 15, 2022, to December 15, 2022. The aim was to reach as many respondents as possible, so the electronic questionnaire was sent via email to 394 first-year full-time bachelor students. Data collection was carried out using an anonymous questionnaire containing 6 questions. The questionnaire consisted of closed-ended questions with the option to mark one or more answers. There was only one open-ended question in the questionnaire. Four questions measured the respondents' attitudes toward the issue under study, and two questions were of an identifying nature and characterized the respondents involved in the research. In the introductory part of the questionnaire developed, a request for completion was made along with a brief justification of the research as well as information about the time of completion.

4. Results

4.1. Financial Impact of the COVID-19 Pandemic

In the first part of the research, selected financial indicators of the 15 most famous Czech gaming companies were monitored. Table 1 summarizes the turnover of gaming companies for the years 2018-2020.

Table 1. Turnover of the most important Czech gaming companies in 2018-2020 (thous. CZK)
(own processing based on data from the Department of Justice (2022))

Company	2018	2019	Annual change	2020	Annual change
Bohemia Interactive Studio	17,990	41,657	132%	55,970	34%
SCS Software	497,091	579,603	17%	791,024	36%
Warhorse Studios	1,076,059	462,523	-57%	249,526	-46%
2K Czech	127,734	178,150	39%	255,691	44%
Amanita Design	45,221	93,051	106%	104,558	12%
Madfinger Games	126,045	121,296	-4%	95,564	-21%
Geewa	166,787	324,062	94%	372,755	15%
Grip Digital	30,918	21,996	-29%	53,099	141%
Beat Games	120,968	801,760	563%	1,441,205	80%
Cenega Czech	13,462	4,959	-63%	2,071	-58%
Cinemax	4,167	3,515	-16%	3,892	11%
DynamicDust	212	41	-81%	53	29%
Gamosaur	677	30	-96%	516	1,620%
McMagic Productions	2,662	722	-73%	764	6%
Wargaming Prague	2,590,576	282,083	-89%	423,735	50%

Table 1 shows that in 2019, a total of 9 companies recorded a decrease in their turnover compared to 2018. In 2020, only three companies (Warhorse Studios, Madfinger Games and Cenega Czech) recorded a decrease in turnover compared to 2019.

Table 2 summarizes the profitability indicators for 2018. Table 2 shows that only one company made a loss in 2018 (Geewa). The other companies made a profit. The highest net profit was recorded for Warhorse Studios. Table 2 further shows the values of ROA, ROE and ROS ratios. The ROA ratio came out positive except for Geewa. The highest value was achieved by DynamicArt, which earned a net profit of 1,275 cents on 1 crore of invested capital in 2018. The ROE indicator came out positive with the exception of Geewa and DynamicArt. The negative value for Geewa was due to the loss. The negative value for DynamicArt was due to negative equity. The best equity appreciation was achieved by Warhorse Studios, which managed to appreciate one invested crown by 108 cents. The last indicator evaluated is ROS. ROS is positive for all companies except Geewa. The last row of Table 2 presents the mean and median of the above financial performance indicators.

Table 2. Profitability indicators of gaming companies in 2018 (own processing based on data from the Department of Justice (2022))

Company	EAT (thous. CZK)	ROA	ROE	ROS
Warhorse Studios	521,85	81.4%	108.2%	47.6%
Beat Games	81,168	83.3%	108.1%	67.1%
Bohemia Interactive Studio	1,822	28.0%	55.1%	10.3%
Wargaming Prague	9,574	10.1%	48.2%	3.6%
GAMMOSAUR	112	9.5%	47.5%	16.5%
GRIP Digital	6,62	31.8%	38.8%	21.4%
SCS Software	298,123	36.5%	37.6%	63.1%
CENEGA CZECH	13,096	20.2%	25.4%	8.2%
Amanita Design	13,784	16.6%	18.3%	29.6%
McMagic Productions	19	6.8%	6.8%	0.7%
MADFINGER Games	9,405	4.3%	4.5%	7.5%
CINEMAX	26	0.2%	3.1%	0.6%
2K Czech	1,745	0.8%	1.3%	1.0%
DynamicArt	102	12.7%	-8.3%	48.1%
Geewa	-14,504	-23.5%	-133.0%	-8.7%
Average	49,461	116.7%	20.7%	18.7%
Median	6,620	10.1%	18.3%	8.2%

Table 3 summarizes the profitability indicators for 2019. Table 3 shows that five companies were loss-making in 2019 (2K Czech, DynamicArt, GAMMOSAUR, Geewa, and GRIP Digital). The other companies made a profit. The highest net profit was recorded by Beat Games. Table 3 below shows the ROA, ROE, and ROS ratios. With the exception of the five companies mentioned above, the ROA ratio was positive. The highest value was achieved by Beat Games, which earned 85.8 cents of net profit from 1 cent of invested capital in 2019. The ROE indicator came out positive with the exception of 2K Czech, Geewa, and GRIP Digital. The positive ROE for DynamicArt and GAMMOSAUR was due to dividing the

loss and negative equity value. The last row of Table 3 presents the mean and median of the above-mentioned financial performance indicators.

Table 3. Profitability indicators of gaming companies in 2019 (own processing based on data from the Department of Justice (2022))

Company	EAT (thous. CZK)	ROA	ROE	ROS
GAMMOSAUR	-286	-38.9%	572.0%	-953.3%
Beat Games	1,844,667	85.8%	126.5%	230.1%
Bohemia Interactive Studio	4,07	34.8%	89.1%	9.8%
Warhorse Studios	210,203	54.3%	66.2%	45.4%
Wargaming Prague	16,479	12.5%	45.4%	5.8%
Amanita Design	39,974	28.7%	35.0%	42.5%
SCS Software	298,456	32.2%	33.0%	53.5%
CINEMAX	682	5.8%	25.1%	19.4%
CENEGA CZECH	2,363	4.4%	4.8%	2.4%
McMagic Productions	12	4.1%	4.1%	1.7%
DynamicArt	-40	-500.0%	3.1%	-97.6%
MADFINGER Games	36	0.0%	0.0%	0.0%
2K Czech	-1,176	-0.6%	-0.9%	-0.5%
GRIP Digital	-2,119	-11.5%	-14.2%	-9.6%
Geewa	-4,272	-4.6%	-64.5%	-1.3%
Average	162,040	-27.7%	61.7%	-55.0%
Median	36	4.1%	4.8%	1.7%

Table 4 summarizes the profitability indicators for 2020. Table 4 shows that four firms are loss-making in 2020 (GAMMOSAUR, Geewa, MADFINGER Games, and McMagic Productions).

Table 4. Profitability indicators of gaming companies in 2020 (own processing based on data from the Department of Justice (2022))

Company	EAT (thous. CZK)	ROA	ROE	ROS
Bohemia Interactive Studio	2,276	18.7%	82.0%	4.1%
GAMMOSAUR	-227	-50.1%	81.9%	-44.0%
GRIP Digital	16,01	33.1%	51.7%	30.2%
SCS Software	440,887	36.2%	37.9%	57.5%
Wargaming Prague	17,909	9.4%	33.0%	4.2%
Warhorse Studios	145,446	29.2%	31.4%	58.2%
Amanita Design	34,551	23.3%	27.3%	32.6%
CENEGA CZECH	7,272	9.5%	13.5%	6.7%
CINEMAX	216	1.8%	5.7%	5.5%
2K Czech	7,392	3.5%	5.1%	2.2%
Beat Games	56,24	2.8%	3.7%	3.9%
DynamicArt	3	100.0%	-0.2%	5.7%
McMagic Productions	-18	-6.6%	-6.6%	-2.4%
MADFINGER Games	-16,176	-14.6%	-15.5%	-16.9%
Geewa	-10,722	-10.5%	-20.7%	-2.9%
Average	19,838	10.1%	16.2%	6.4%
Median	7,272	3.5%	5.7%	4.2%

The other companies were making a profit. The highest net profit was recorded for SCS Software. The ROA indicator came out positive with the exception of the four companies mentioned above. The positive ROE for GAMMOSAUR was due to the division of the loss and the negative equity value. On the other hand, DynamicArt achieved a negative ROE despite a positive net profit. This is due to the negative equity value. The last row of Table 4 presents the mean and median of the above financial performance ratios.

The differences between the medians of the observed indicators are not statistically significant at the alpha 5% level (see Table 5). Thus, there was no statistically confirmed difference in the values of the financial indicators in the years before and during the COVID-19 pandemic.

Table 5. Mann-Whitney (Wilcoxon) W-test to Compare Medians (P-Values)

Indicator	Year 2018 - Year 2019	Year 2018 - Year 2020	Year 2019 - Year 2020
Turnover	W = 113.0 (1.00000)	W = 115.0 (0.933881)	W = 117.0 (0.868221)
EAT	W = 94.0 (0.455300)	W = 107.0 (0.835700)	W = 119.0 (0.803458)
ROA	W = 80.0 (0.184409)	W = 85.5 (0.2716400)	W = 116.0 (0.900966)
ROE	W = 107.5 (0.851913)	W = 97.0 (0.5338270)	W = 102.5 (0.693514)
ROS	W = 82.0 (0.213373)	W = 84.0 (0.2454840)	W = 116.0 (0.900966)

4.2. Impact of the COVID-19 Pandemic on Users

The questionnaire had 208 visits and 57 of them ended with the questionnaire not being run. A total of 151 respondents started the questionnaire and none of them closed the questionnaire before it was completed. The overall success rate of completing the questionnaire is therefore 38%. It is worth noting that such a return rate, according to some experts, may impair the generalizability of the survey findings. Before completing the questionnaire, respondents were advised that the questionnaire would take them a maximum of 5 minutes to complete. In fact, 74.15% of respondents took < 1 minute to complete the questionnaire, 22.47% took 1-2 minutes and 2.8% took 2-5 minutes. Only 0.56% of the respondents took more than 5 minutes to complete the questionnaire.

The basic categorization of the data - respondents by gender and age – is presented for clarity in the introductory part of the research results, in the following figures 1 and 2. Questions 3 to 6 are analytical questions.

Of the 151 respondents, 54.3% of women and 45.7% of men responded in relative terms, i.e., 82 women and 69 men in absolute terms (see Figure 1). Follow-up question 2 asked for the age of the respondent.

Of the 151 respondents, 31.13% were between the ages of 20-21 years, specifically 47 respondents. The age group of 22-23 years was 30.46% of respondents and the age group of 18-19 years was 20.53% of respondents. Further, 4 respondents were in the age group of 26-27 years and 2 respondents were in the age group of 28-29 years. There was no representation of respondents under the age of 18 years as these respondents are not college students and were not included in the survey as shown in Figure 2.

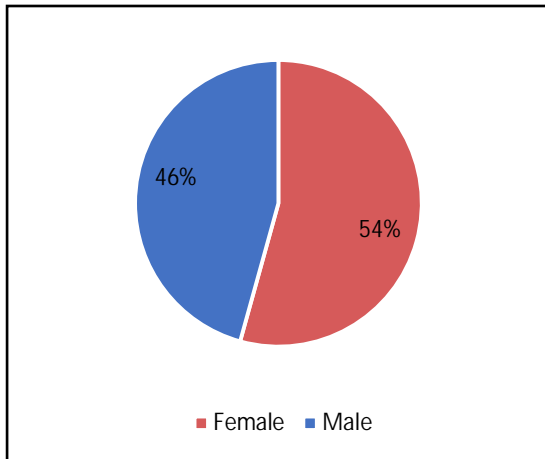


Figure 1. Gender of respondents

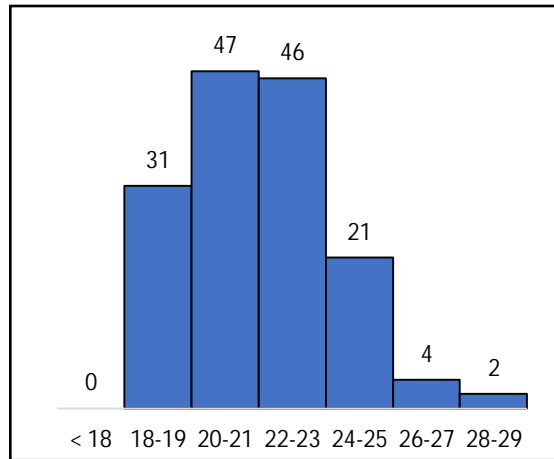


Figure 2. Age of respondents

Question 3 of the survey focused on how often students played video games BEFORE the COVID-19 pandemic. The results are shown in Figure 3. Figure 3 shows that before the COVID-19 pandemic, most students i.e., video game users played several times a week (38 responses). The second most common response was "rarely" (35 responses). The figure shows that the third and fourth ranked responses were several times a day (22 responses) and once a day (21 responses).

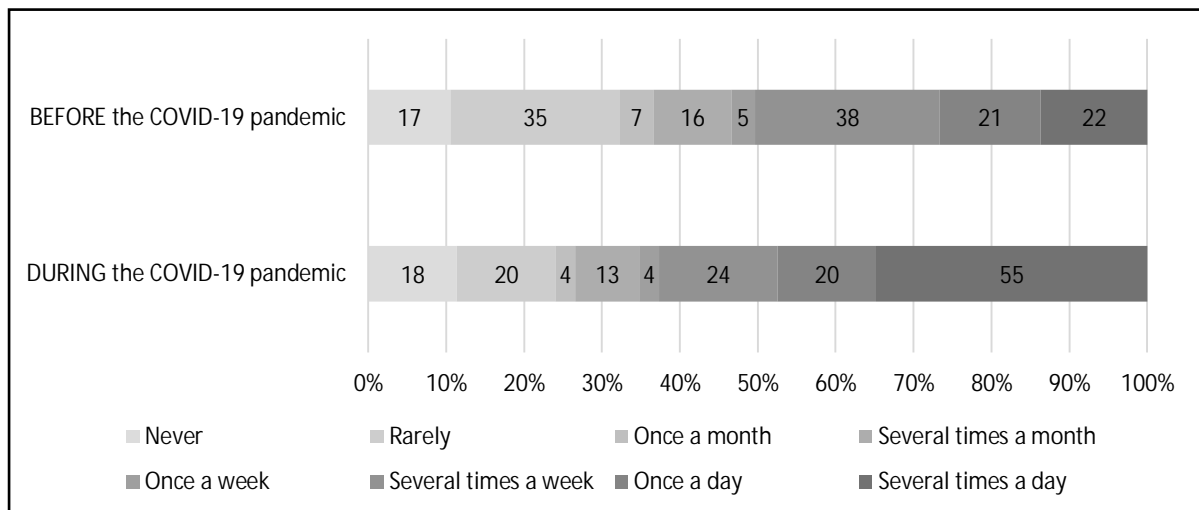


Figure 3. How often did you play games BEFORE and DURING the COVID-19 pandemic?

Question 4 focused on how often students played the video game DURING the COVID-19 pandemic. Multiple answers could be selected for this question. The results are also shown in Figure 3. Figure 3 shows that during the COVID-19 pandemic, most students, i.e., video game users, played several times a day (55 responses). The second highest response was "several times a week" (24 responses). The answer "rarely" showed a significant decrease compared to the previous question 3 (only 20 responses). Figure 3 shows the gaming habits of respondents before and during the first wave of the COVID-19 pandemic and demonstrates a clear shift towards a higher frequency of gaming. For example, Figure 3 shows that 13.6% of respondents reported playing video games several times a day before the pandemic, while this proportion increased to 34.8% during the pandemic. At the other

end of the scale, 21.7% of respondents said they rarely played games before the outbreak, while this proportion dropped to 12.6% during the pandemic.

Question 5 focused on what type of games users preferred BEFORE the COVID-19 pandemic. The results are shown in Figure 4. Figure 4 shows that before the COVID-19 pandemic, most students i.e., users played mobile games (59 responses). The second response was "computer games - free-to-play" (45 responses). In third place was "computer games - buy-to-play" (43 responses). A total of 21 respondents did not play any of the above types of video games and 14 respondents played a combination of all the above types of video games.

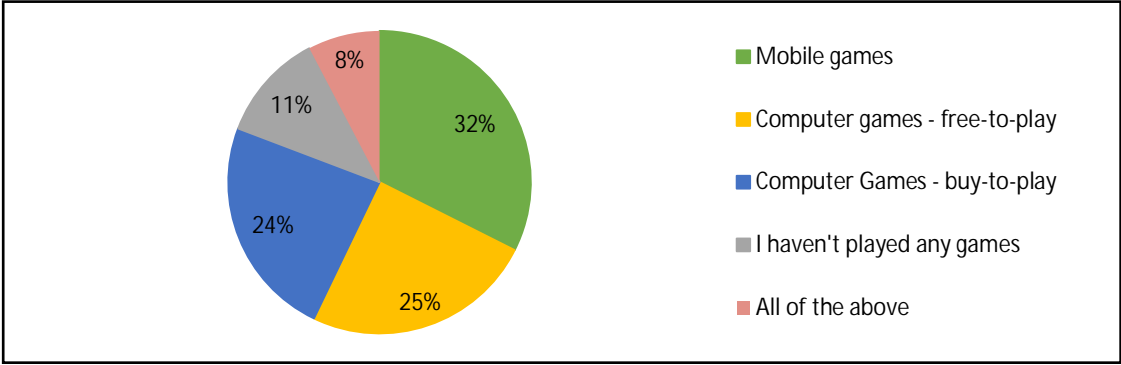


Figure 4. What type of video games did you prefer BEFORE the COVID-19 pandemic?

Question 6 focused on what type of games were preferred by users DURING the COVID-19 pandemic. Multiple answers were possible for this question. The results are shown in Figure 5. Figure 5 shows that during the COVID-19 pandemic, most students played computer games - free-to-play (56 responses). The second response was "mobile games" (53 responses). In third place was "computer games - electronic license" (49 responses). A comparison of the two graphs shows a shift of some users towards computer games - free-to-play and buy-to-play. During the COVID-19 pandemic, interest in mobile games declined.

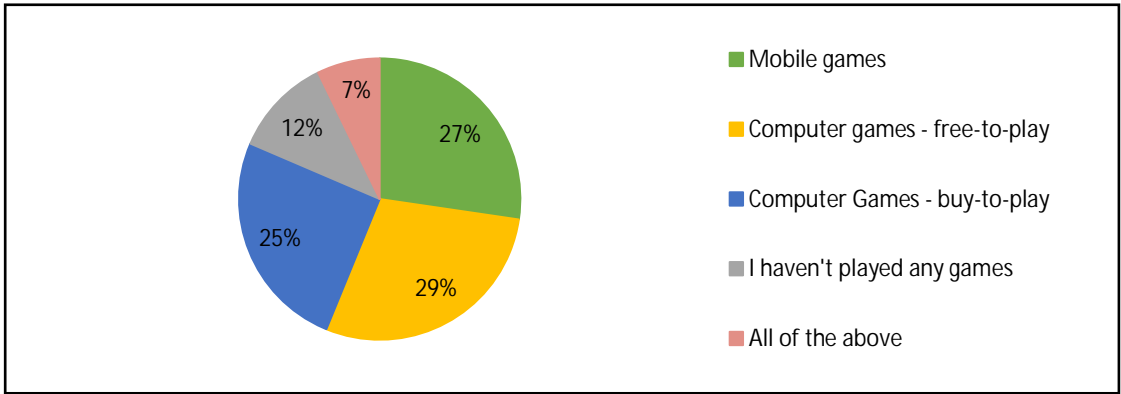


Figure 5. What type of video games did you prefer DURING the COVID-19 pandemic?

5. Discussion

The research found that Czech gaming companies recorded a higher turnover in 2020 compared to 2019. A similar conclusion was reached by Şener and Yalçın (2021). The ratios that focused on the profitability of individual companies fluctuated over the years. The

differences between the medians of the indicators studied were not statistically significant in the years 2018 to 2020. Thus, the difference in the values of financial ratios in the years before and during the COVID-19 pandemic was not statistically confirmed.

The questionnaire survey revealed that there was a higher interest among students in computer games during the first wave of the COVID-19 pandemic. Students also responded that they played games several times a day and several times a week during the pandemic. The NPD Group (2022) and authors Barr and Copeland-Stewart (2021) came to a similar conclusion.

For better and more accurate results, it would be desirable to supplement the research with additional questions that would focus more on the main reasons for the higher interest among students in video games. It is also important to note that the research was only conducted for the first wave of the COVID-19 pandemic. Future research should focus on the year 2021, which has also been associated with strict anti-epidemic measures.

6. Conclusions

The aim of the research was to investigate in more detail the impact of the first wave of the COVID-19 pandemic on Czech companies operating in the gaming industry. The research was primarily based on the analysis of secondary financial data on Czech gaming firms. The research was further supplemented by the collection of primary data, which was obtained through a questionnaire survey among first-year students of the Faculty of Economics, Technical University of Liberec.

Based on the examination of selected financial indicators, an increased turnover of gaming companies in 2020 was found. It can be assumed that the increased turnover was because of increased user interest in video games during the first wave of the COVID-19 pandemic. However, the research results did not support the hypothesis that gaming companies achieved better profitability in 2020 compared to 2019. The differences between the medians of the observed indicators are not statistically significant. Mann-Whitney *W*-test did not confirm the difference in the values of financial indicators in the years before and during the COVID-19 pandemic. Profitability as measured by the traditional metrics of EAT, ROA, ROE, and ROS were approximately the same in all years.

A questionnaire survey conducted among first-year undergraduate students revealed an increased interest in video games during the first wave of the COVID-19 pandemic. Most users preferred mainly free-to-play computer games during the COVID-19 pandemic and buy-to-play games. On the other hand, the research showed a slight decrease in interest in mobile games.

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