

The Effect of Covid-19 Pandemic on Digital Games and eSports

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Abstract

The period of pandemic caused by Covid-19 virus has affected the whole world. During this time, people had to spend a long time in their houses with various restrictions such as quarantine periods, travel restrictions between cities or countries. In this process, digitalization has gained momentum in daily life; especially digital games have been an important tool for people to spend time. Accordingly, it is thought that the digital game and eSports industry has been affected by this situation in various ways. The aim of this research is to make a review by examining the effects of Covid-19 pandemic on digital games and eSports in the light of various sources and data. As a result of the research, it has been found that the digital game industry has been positively affected especially in the economic sense. eSports sector, on the other hand, has been adversely affected in the economic sense since the pre-determined organizations have not been implemented. In this period, the digital game area that has attracted attention with its development has been mobile games. In the eSports area, sim racing games and organizations have attracted a lot of attention.

Keywords: Sports, Digital game, Covid-19, Pandemic, Sim racing

Introduction

The period of pandemic caused by Covid-19 virus has brought important problems in global sense. The health systems, economic expectations and political life of the countries have been adversely influenced. Death news, quarantine periods, various restrictions varying from country to country have had a negative impact on the entire society psychologically. In this sense, it can be said that academic research and suggestions are very important for the pandemic period and afterwards.

Covid-19 disease is a virus identified on January 13, 2020, as a result of research conducted in a group of patients who first applied to the hospital in Wuhan, China in December, with the complaints of respiratory tract disease (fever, cough, shortness of breath) (Republic of Turkey, Ministry of Health, 2020). As a result of Covid-19 virus, more than 11 million people worldwide were infected and more than 500 thousand people died (World Health Organization (WHO), 2020). Covid-19 pandemics led to many negative situations such as quarantines, travel restrictions, closure of schools and dismissals as a consequence of reduced workforce in the economic sectors (Nicola et al. 2020). This process has also affected significantly daily activities globally (King et al., 2020). The United Nations Development Program (2020) emphasized that this virus is much more than a health crisis, underlining that it will likely cause poverty and inequality on a global scale, although it varies from country to country.

While the whole world was fighting with Covid-19, the sports world was also affected by this situation and faced a series of crises (Turkmen & Özsarı, 2020). Given the networked nature of the sports industry and the organizational dimension that brings athletes together, workers and fans in this field have been viewed as potential threats to the spread of the virus (Parnell, 2020). In this sense, almost all major sports events and events, including the Olympic games, have been canceled or postponed (Hull, Loosemore & Schwellnus, 2020). It can be said that the most obvious and greatest effect of this situation is in the economic dimension. The fact that the inability to obtain match and advertisement revenues due to the failure to implement the planned program has negatively affected the financial statement. Compared to individual sports, team sports and clubs in this scope have more financial obligations. It can be stated that clubs in this context have been affected more negatively during the pandemic period. For this reason, a decision has been made to help the clubs. For example, FIFA has decided to help and announced that it will provide \$ 1.5 billion of aid to the clubs in three stages with the "Covid-19 aid plan" (FIFA, 2020). It is believed that for the post-Covid-19 clubs may shrink economically and some events in traditional sports can be transferred to the eSports environment. Considering these developments, it can be said that expectations from digital games may be different in the future.

The most important effect of this period is that it has forced social and commercial life to be digitalized to a great extent (Türkmen & Özsarı, 2020). The quarantine process during which people had to stay at home significantly increased the number of participants of online games (King et al. 2020). While many areas have been negatively impacted in this period, the interest in the digital game industry has increased considerably. Accordingly, the game industry has been positively affected both in terms of economy and participants.

The aim of this study is to make a review by examining the effects of Covid-19 pandemic period on digital game and eSports world from different perspectives and evaluating the current situation.

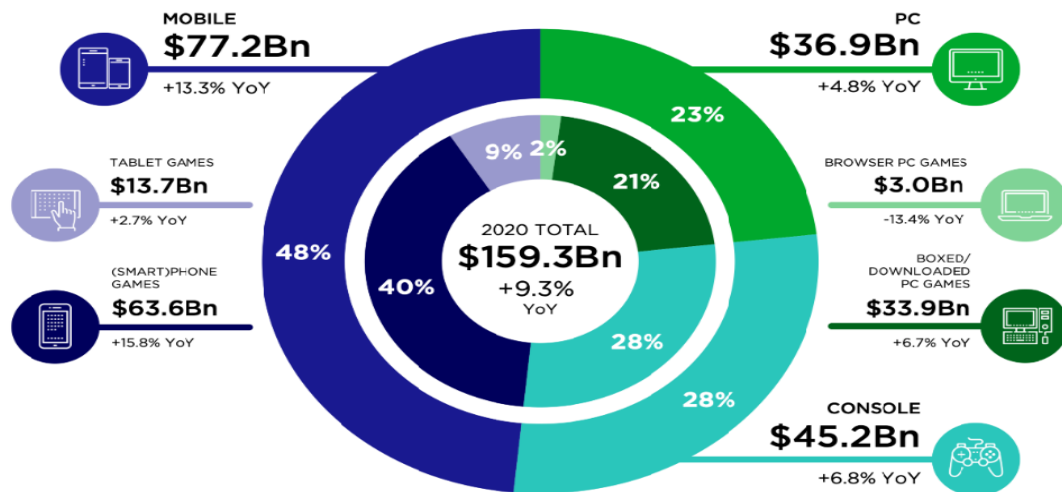
Economic Effects of Covid-19 Pandemic on Game Industry

Prolonged quarantine periods led people to different quests and daily activities tended to become more digital. Besides watching TV series and movies on different platforms, it can be said that playing games has been the most popular activity in this period. At this point, the digital game industry has made significant progress. While the world was experiencing an unprecedented period, games were used as an escape and time passing tool for humans. Therefore, it is estimated that the global game market will reach a growth rate of 9.3% by 20.3 billion dollars in 2020. The number of players is estimated to reach 2.7 billion (Wijman, 2020). According to March data, it is seen that the money spent by the players increased by 60% compared to the previous year (Facteus, 2020). In this study, the projected revenues of mobile games, pc and console games in 2020 are discussed.

All gaming platforms have showed some improvement during the Covid-19 pandemic. However, mobile games became the playground that showed the greatest development in this period (Wijman, 2020). Globally, the mobile game market is projected to generate \$ 77.2 billion in revenue in 2020 and reach a healthy growth rate of 13.3%. The main reason for this increase is that people have had to stay home because of the measures taken as a result of the covid-19 pandemic (Gu, 2020). According to another argument, the global smartphone and tablet games market, which was 58.3 billion dollars in 2019, is expected to be 97 billion dollars in 2020 (Research and Markets, 2020). It can be said that the fact that smart phones and tablets are easily accessible and widespread, and that popular mobile games are free has importantly affected this development. The Apple App Store is projected to generate \$ 38.8 billion in mobile gaming revenue in 2020, and will grow by 10.3%. This figure is more than half of the revenue in the mobile game market. On the other hand, Google Play is expected to generate \$ 27.8 billion in revenue from mobile games this year, and will grow by 15.0%. Finally, the Android app store is expected to grow 20.5% by earning \$ 10.6 billion in mobile games this year. Banning Google Play in China is thought to have a significant impact on increasing Android revenues (Gu, 2020).

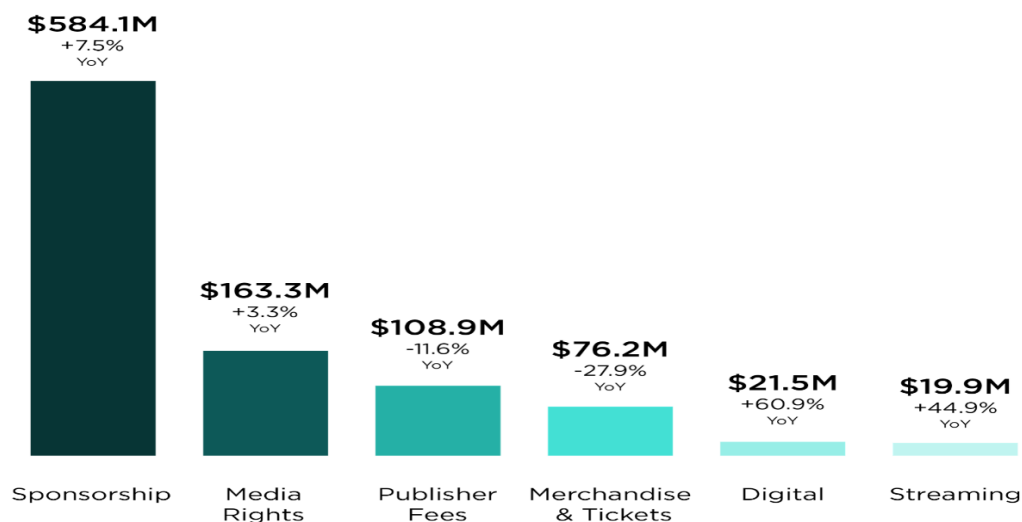
There is physical distribution in console games. For this reason, the release date of some games has been postponed and console games have been negatively influenced by this situation. Despite these disadvantages, console games are developing in a sectoral sense. The console game industry is expected to grow by 6.8% by generating \$ 45.2 billion in revenue in 2020. In this process, it is predicted that 729 million players will participate in console games. Finally, the PC gaming industry is expected to grow 4.8%, generating \$ 36.9 billion in revenue. 1.3 billion players are expected to participate in PC games (Wijman, 2020). It can be suggested that it is very important to play e-sports games on PC. It can also be claimed that the Covid-19 pandemic period has given momentum to the growing game industry. In this period, especially the development of mobile games has attracted much attention. The fact that phones and tablets are easily accessible provides a significant advantage over other devices. Especially considering the development of mobile game consoles and the existing data, it is thought that this may have a significant impact in the game industry in the future.

Table 1. Per Device & Segment with Year-on-Year Growth Rates (Newzoo, 2020a).



In the Covid-19 period, eSports organizations have gone through important changes. Many national or international esports events have been postponed, canceled or transferred online, which has adversely affected the esports sector in the economic sense. Despite this situation, eSports sector is expected to make a progress. While the Esports sector reached \$ 957.5 billion in 2019, this figure is expected to be \$ 973.9 billion in 2020 (Rietkerk, 2020). Game makers, players and eSports clubs have the opportunity to get resources from different areas. These are sponsorship, media rights, publisher free, merchandise & tickets, digital and streaming revenues. In this process, the fact that the players and the audience could not come together physically and the organizations could not be made has affected especially the merchandise & tickets revenues. For example, in 2019 Fortnite World cup held at Arthur Ashe stadium in New York, only \$ 5 million of revenue was obtained from tickets. (Grossobel, 2020). The inability to hold organizations has negatively impacted eSports sector, similar to traditional sports. Unlike traditional sports, it can be seen as an important advantage that e-sports is digital and online broadcasts can be made. As a matter of fact, when Table 2 is analyzed, it is estimated that the streaming revenues will develop by 44.9%.

Table 2. eSports revenue streams for 2020 according to Global Esports Market Report data (Newzoo, 2020b).



As a result, it is predicted that in general the digital game industry will improve. However, the most remarkable economic development in the Covid-19 pandemic period is expected to be in the size of mobile games. This development may be because mobile devices are more easily accessible, less software-intensive and more preferred by children. In the eSports dimension, it can be said that the organization revenues have been negatively affected so far for 2020. However, it is thought that the interest and awareness of eSports has increased. This may have a positive effect on the eSports economy for the post-pandemic period.

Developments in Esports in the Covid-19 Pandemic Period

Games played on PC, mobile or console platforms can be called as digital games. However, not every digital game is covered by esports. In order to define a digital game as eSports, it is necessary to organize amateur or professional competitions at the national or international level within the scope of that game (Rubleske, Fletcher and Westerfeld, 2020). Turkey e-sports federation (TESFED) identified e-sports games under the category of Real-time strategy (RTS), the first-person shooter (FPS), Multi-player online battle arena (MOBA), Battle royale, Massively multiplayer online role-playing Game (MMORPG), fighter, and Sports games (TESFED, 2020). In general, during this period, players both participated in digital games and followed the games through different platforms. When the growth data of Newzoo between December and 2020 between the players is analyzed; It is found out that the game groups have improved in the rates of Shooters 40%, Gambling Games 36%, Deck-Building Games 34%, Arcade Games 28%, Platformers 25% and Battle Royale 17%. However, the greatest improvement has been in games in the MOBA group (Jackson, 2020). It seems that the pandemic process has significantly changed the number of players.

Players and viewers from all over the world participate in eSports organizations. However, due to travel restrictions, quarantine periods, and uncertainties, players could not leave their cities or countries. Since the covid-19 virus, which emerged in the first quarter of 2020, is expected to continue to show its effect in the second half of the year, many e-sports organizations have been postponed, canceled or transferred online.

Table 3. Esports organizations postponed and canceled due to Covid-19 pandemics

| eSports Events | Canceled | Postponed |
|---|----------|-----------|
| Arena of Valor World Cup 2020 | * | |
| ESL One Birmingham 2020 Online Leagues | * | |
| Tekken World Tour 2020 | | * |
| PUBG 2020 Global Series | * | |
| Combo Breaker 2020 | * | |
| Street Fighter League Season 3 | | * |
| The OGA Dota PIT Minor 2020 | * | |
| Taipei Major 2020 | * | |
| ESL One Los Angeles Major | | * |
| NBA 2K League | | * |
| Fighter's Spirit 2020 | | * |
| Rainbow Six SiegePro League | * | |
| NorCal Regionals 2020 | * | |
| League of Legends Mid-Season Invitational | * | |
| Tekken World Tour | * | |
| WESG APAC Finals | * | |
| Asia Pacific Predator League 2020 | | * |

| | | |
|---|---|---|
| China's League of Legends Pro League | | * |
| SNK World Championship Japan Tour Final | | * |
| ESL One Los Angeles Major Chinese Qualifiers | | * |
| Overwatch League | | * |
| League of Legends Championship Korea | | * |
| Rocket League World Championship | * | |
| Apex Legend Global Series | | * |
| LEC Spring Finals | * | |
| Pokemon World Championships 2020 | * | |
| Combo Breaker 2020 | * | |
| The ESL One Rio 2020 CS | | * |
| The Evolution Championships Series | * | |
| Call of Duty League | * | |
| Mortol Kombat 11 | * | |

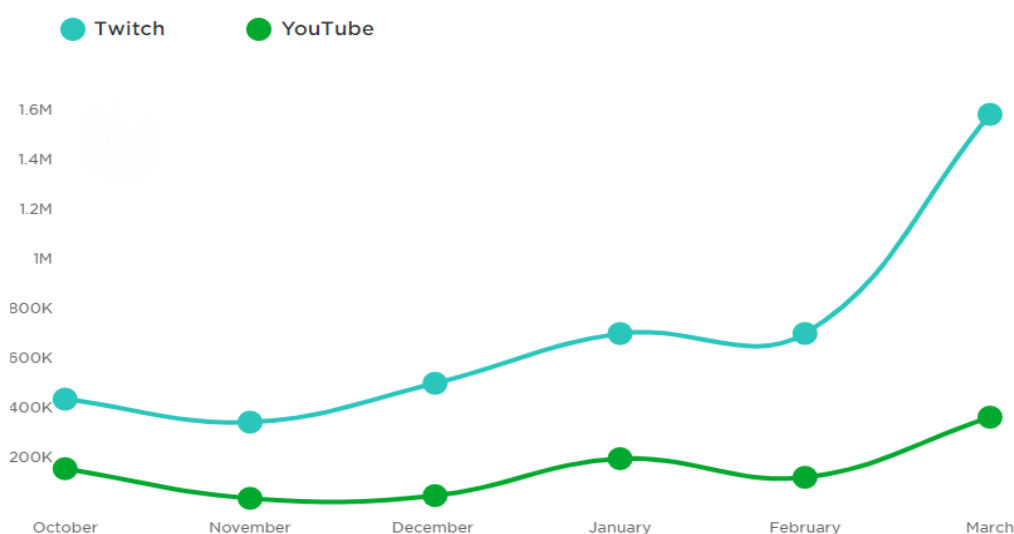
In this period, various organizations were organized over eSports as an alternative to traditional sports. English Premier League organized online events called “ePremier League Invitational Tournament” with the participation of Premier League players on the English Premier League FIFA 20 game. The first organization was attended by Trent Alexander-Arnold, Raheem Sterling, Diogo Jota and Dwight McNeil. In the final, Diogo Jota beat Trent Alexander-Arnold 2-1 and became the winner of the first tournament. This organization was watched by 52.00 spectators (Grossobel, 2020). The second tournament was held between May 5-9, and matches were broadcast on Sky Sports, YouTube, Twitch, BBC Sports website and iPlayer. Many Premier League players participated in this tournament, and James Maddison, who beat John Egan 5-1 in the final, became the champion (Premier League, 2020). Likewise, NBA players joined the "NBA2K20 Players Tournament" online via the NBA2K20 game. Devin Booker, who defeated Deandre Ayton in the final, won the tournament with the names of Kevin Durant, Trae Young, Zach Lavine and won the 100-thousand-dollar prize. The prize was donated as determined at the beginning of the tournament (NBA2K, 2020). Similarly, NFL organized a tournament called "The Checkdown NFL Madden 20 Tournament" on NFL Madden 20. A total of 10 NFL players such as Desean Jackson, Derwin James and Keenan Allen participated in the tournament. Derwin James won the tournament (NFL, 2020).

Covid-19 Pandemic and the Rise of Sim Racing

Racing games in eSports are the digital races of traditional races. “Sim racing” means simulation racing; It is a simulation type that briefly aims to recreate auto racing in digital environment. It tries to offer the player as close as possible experiences to activities that could actually occur in an automobile race (Paiva, 2015). Sim racing players aim to control the same way in the game as they actually control a car in racing games (Chan, Chan & Gelowitz, 2015). Sim racing games are simulation games that offer the most realistic experience among eSports games. Not all racing games fall into the sim racing class. In Sim racing games, physics of vehicles are exactly the same as real ones. Real tracks are scanned with laser scanning technology and transferred to digital media. Many details such as the effect of

weather conditions, tire and brake wear are included in these games. Your equipment is very important in Sim racing. Accordingly, players get feedback in the game with steering, pedal, movable or immobile cockpits. As Sim racing games, iRacing, F1, rFactor, Asetto Corsa and Dirt Rally game series are preferred on PC, while Grand Turismo, Project Cars and Forza game series are preferred on consoles. It can be said that Sim Racing games showed a significant improvement in terms of players and viewers during the covid-19 pandemic period. The main reason for this development is thought to be the participation of many professional racing pilots in sim racing organizations held in this period. Sim racing games are quite realistic and allow playing online. This situation has attracted a lot of viewers. When Table 4 is analyzed, according to the data of Newzoo analysis company, iRacing game's audience increase in March is remarkable. Live view rate increased by 117%.

Table 4. Number of viewers of iRacing between October and March (Jackson, 2020).



Many sim racing organizations were organized during this period. The "24 Hours of Le Mans Virtual" held on 13-14 June attracted great attention. Sim racing players participated in the race along with world famous racing pilots such as Fernando Alonso, Felipe Massa, Max Verstappen, Jenson Button. The race was played on the rFactor2 game, and the famous basketball player Tony Parker started the game. The 24-hour race was followed by a total of 20 million people on TV and social media (24 Hours of Le Mans Virtual, 2020). In this period, the organization of "Formula 1 Virtual Grand Prix" was organized. More than 30 million viewers on TV and social media in more than 100 countries followed this organization implemented with the participation of professional racing pilots (Formula 1 Virtual Grand Prix Series, 2020). Finally, the "eNascar iRacing Pro Invitational Series" organization, held during the covid-19 pandemic period, with professional racing pilots such as Kyle Busch and Denny Hamlin, attracted great attention (eNascar, 2020). During the Covid-19 pandemic, similar to these organizations. many other sim racing races were held.

Conclusion

The game industry has been significantly affected by the covid-19 virus. During the Covid-19 pandemic period, this influence on the digital game industry positive has been positive. Especially, the development of mobile games has attracted attention. In the eSports

dimension, many organizations have been postponed, canceled or moved online. This situation has caused loss of income for the eSports sector. Despite this situation, it is predicted that eSports sector will develop. One of the Esports areas that has aroused interest during the pandemic period was sim racing. Along with the technological developments, sim racing games have reached the level of reality. Sim racing games offer a lifelike experience for viewers and players. It can be said that it is very important for professional racing pilots to transfer their skills to the virtual world. Therefore, these organizations are thought to be followed with interest.

The Covid-19 pandemic period has paved the way for digitalization in all areas. Platforms that allow online games and live broadcasting have caught people's attention in this period. It can now be said that people are more aware of digital games and eSports. The world of digital games and eSports will undoubtedly continue its development faster after this process.

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