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SPORT AND THE METAVERSE

AS THE WORLD GOES META, WILL SPORTING EVENTS FOLLOW?

April 2023

AUTHORS

Rauf Mammadov works as a director with PWC's consulting practice. He is also pursuing a Doctorate in Business Administration (DBA) at the IE Business School in Madrid, Spain. Rauf's research focuses on the influence of mega sporting events on the entrepreneurial ecosystems of host countries. Prior to the DBA studies, in 2007, Rauf received the Master's degree in Public Administration from Harvard University.

Simon Chadwick is Professor of Sport and Geopolitical Economy at SKEMA Business School in Paris, and a member of the think tank SKEMA Publika. He has written extensively about the digitalisation of sport and has a particular interest in how countries seek competitive advantages and political benefits through the deployment of sports technology.

INTRODUCTION

Traditionally, sports and sporting events have attracted large crowds of participants and spectators. Sporting events are based on the rules and standards established by organising committees (Bjeljac and Radovanovic, 2003), and are typically held physically. However, Covid-19-related restrictions have temporarily severed most of these physical social activities, resulting in many teams and sports organisations losing their revenue. As a result, these organisations have started considering virtual events, and in some cases – such as The Premier League and La Liga (Agini & Di Stefano, 2020) – have successfully broadcast matches through the internet. Furthermore, some teams and leagues have realised that they can enhance attendance by adopting the metaverse, allowing an unlimited number of people to attend the events simultaneously, thus providing an opportunity to increase revenues.

Although Covid-19-related restrictions have been lifted, many football clubs and leagues have understood the important role that the metaverse can potentially play in allowing more fans to attend live matches and other sporting events from the comfort of their own location. For example, the Australian Open successfully allowed fans to attend the event through a metaverse platform called Decentraland in January 2022 (Sundaravelu, 2022; Shimron, 2022) and generated more revenues through Art Ball's non-fungible token (NFTs) that sold USD 692,778 (Sundaravelu, 2022). AC Milan against Fiorentina at San Siro in May 2022 was the first football match to be broadcast on the metaverse (Hall, 2022). While metaverse can allow more fans to attend sporting events, thus increasing the revenues, concerns are being raised on issues such as contractual agreements regarding broadcasting rights, the privacy and security concerns of players and spectators alike, and how to ensure that all people can access metaverse-related technologies to watch their favourite teams play.

- ***Defining Sporting Events***

Sporting events are competitions organised in a specific place and time according to specified rules and standards (Bjeljac and Radovanovic, 2003). However, there is no agreed upon definition of sporting events because they vary in size, form, shape, and functions. The lack of consensus on the definition of sporting events has made some events, such as the Olympic Games, be considered mega, hallmark, special, prestigious, and festive, all at the same time (Gammon, 2011). Although there are many types of sporting events, only a few can attract global attention. Mega sporting events

are historically, socially, politically, and economically valuable to all nations and the organising institutions (Lee-Ludvigsen, Rookwood & Parnell, 2022). Mega sporting events are defined as large events bringing together people from different nations and with varying cultures and beliefs and, in the process, spur economic development in the host nation(s) (Malfas, Theodoraki & Houlihan, 2004).

Last, it is important to consider that some events have variations in the number of visitors, the number of spectators reached, the amount of financial resources utilised, and the impact on society and the environment. Some may attract a large number of visitors but require relatively small investments, while others may require significant investments to plan and yet attract fewer visitors (Müller, 2014). Regardless of the size or form, the question is whether the host cities and nations benefit significantly, considering that they make immense investments through the development and improvement of infrastructure (Chalip & Fairley, 2020).

- ***Defining the Metaverse***

The definition of the metaverse has been controversial since its popularity began to increase in 2021. On the one hand, according to Lovich (2022), the metaverse is a combination of virtual reality and mixed reality that people can access through a computer browser and a headset. In a similar fashion, Joshi (2022) defines the metaverse following the exact explanation by Neal Stephenson in his 1992 sci-fi novel *Snow Crash*, which indicates that the metaverse is a three-dimensional technological virtual world. On the other hand, Binance (2021) defines a metaverse as a persistent, online, 3D universe based on different virtual spaces. According to Ravenscraft (2022), the metaverse has not been well understood and its potential impacts, both positive and negative, remain unclear.

The metaverse allows for the seamless integration of several technologies to enable people to communicate or engage in business activities. However, there have been questions regarding the applicability of virtual or augmented reality environments in the real world (Knox, 2022). Unlike current systems that have been institutionalised, the metaverse can allow all people and things to interact physically when they meet in their usual settings at home or offices and in the virtual world where they may have similar facilities. D'anastasio (2022) indicates that gamers are already doing what the metaverse promises to do in the future. For example, gamers have already been using platforms with many functions resembling the metaverse, including sophisticated social systems (D'anastasio, 2022).

Interest in the metaverse increased after Mark Zuckerberg announced that Facebook was changing its name to Meta in October 2021 (Quiroz-Gutierrez, 2022). According to Mileva (2022), the value of metaverse will increase from USD 47 billion in 2020 to more than USD 800 billion by 2024. Many people and organisations are purchasing virtual reality and augmented reality applications, and the market size for such applications is expected to exceed USD 300 billion by 2024. This trend is expected to accelerate in 2022 and the subsequent few years, though Meta has recently perhaps signalled a change in direction and focus, with an announcement that it is creating a generative AI team.

The United States and China are leading in terms of the number of companies that have invested in the metaverse platforms. The leading companies in the United States are Meta, Roblox corporation, Microsoft, Nvidia, Nikeland, and Epic Games (Council of the European Union, 2022). Other major corporations that have indicated that they are investing in the metaverse include Nike, McDonald's, and JP Morgan Chase (Quiroz-Gutierrez, 2021). The leading metaverse investors in China are Tencent, ByteDance, NetEase, and Bilibili. The uniqueness of the Chinese approach is due to the formation of the Metaverse Industry Committee, which indicates that the Metaverse is a priority for the country (Council of the European Union, 2022). The growing interest in different parts of the world has led to an increase in the number of people using the metaverse and those who consider using the platforms at some point in the future. Although statistics on the growth of the metaverse vary among different researchers and companies, there is a consensus that the market will continue to grow exponentially due to the integration of applications that many people like, including social media, games, and advertising (Council of the European Union, 2022; Mileva, 2022; Bloomberg Intelligence, 2021).

SPORTING EVENTS IN THE METAVERSE

The recent lockdown has accelerated the digitalisation of many sporting activities, whose organisers have been considering alternative ways to continue engaging their fans, sponsors, and broadcasters so as to generate revenues. The following sections discuss the role of the metaverse in different sporting events, highlighting the opportunities and challenges in the road ahead:

- ***Football, Sizing Opportunities***

Football has become the latest sport to provide an option for fans to watch live matches through the metaverse. The first football match broadcast over the metaverse was between AC Milan against Fiorentina in May 2022 (Hall, 2022). The match was broadcast to fans in the Middle East and the North Africa region through the Serie A room in the metaverse (Hall, 2022). Although the match did not achieve the expected outcomes of attracting large numbers of spectators, it set the foundation for future football matches in the metaverse. Lewis (2022) states that the metaverse is the future of football as many European football clubs have started investing in the metaverse. The Premier League and La Liga introduced e-sport tournaments on the already popular FIFA 20 video game (Agini & Di Stefano, 2020). More sporting events will be held in the metaverse in the future following the consultative meeting on the future of sports from top speakers from Meta, DapperLabs, Sandbox, UEFA, LaLiga, and Under Armour held in February 2022 (Olwyn, 2022).

- ***Tennis, Metaverse Pioneer***

The Australian Open tennis tournament is the only major sporting event that has been broadcast on the metaverse, as of January 2022. Fans used virtual reality headsets to join the event, and could access exclusive behind-the-scenes footage from 300 cameras around Melbourne Park, live footage and radio broadcasts from the event, virtual interactions with tennis players and other fans, and view the historical data for the Australian Open (Sundaravelu, 2022; Shimron, 2022). Extending the Australian Open to the metaverse meant there were no space limitations, and allowed many fans, who could not travel due to restrictions, to attend the event virtually, which benefited both fans and organisers (Bundi & Zehnder, 2022).

- ***Formula 1, Engaging Fans in Virtual Worlds***

The Formula 1 tournament was expected to lose revenue of between USD 40 million and USD 70 million per cancelled Grand Prix, during the Covid-19 pandemic lockdowns (Agini & Di Stefano, 2020). Although these events could not be fully digitised, they allowed the organisers to generate some revenue instead of having to cancel the events. Some Formula 1 racing companies are trying to engage their fans through the metaverse. For example, Alfa Romeo has indicated that it will start using the metaverse to enhance the experience of fans (Digital Nation Staff, 2022) through the Everdome metaverse platform, which allows virtual land sales, creation, and exchange of NFTs, and marketplaces and avatars. Alfa Romeo F1 Team Orlen will own real estate on Everdome through which it will hold events and allow fans to interact with the Formula 1 drivers virtually (Digital Nation Staff, 2022). The interest in metaverse racing has increased due to the meta driver project that comprises approximately 6,666 NFTs of 3D racing drivers (Motorsport.com, 2022) and GP Metaverse's collection of 10,000 unique race car NFTs (GP Metaverse, 2022).

- ***Advantages of Hosting Sporting Events in the Metaverse***

As described above, hosting sporting events in the metaverse is advantageous since it places no limitations on the number of people who can attend virtual events. A good example is FIFA, involving La Liga teams and players, whose matches were watched virtually by approximately 170,000 people – a number higher than the people who attend such matches under normal circumstances (Ellison, 2020).

According to Bloomberg Intelligence (2021), the metaverse may enable companies to generate approximately USD 200 billion through live concerts and sporting events by 2024. The potential for generating more revenues through the metaverse has made NBA, NFL, and NHL consider using the virtual platforms to reach more fans and generate more revenues (Cordero, 2021). Furthermore, metaverse allows the creation of different tiers of tickets with different prices which can help generate more revenues.

Furthermore, unlike the stadiums and other physical venues that maintain the same design and structure, the venues and their design can be changed in the metaverse. Cordero (2021) states that it is possible to use different themes as organisers wish, depending on the event. Events can also be held in different places, including the moon and other planets, depending on the nature of the event. At the same time, spectators can engage in other activities while watching sporting events through the metaverse, such as listening to music, shopping, and interacting with friends and players, which has been achieved during the Australian Open on the metaverse (Shimron, 2022).

- ***Challenges of Hosting the Sporting Events in the Metaverse***

One of the major challenges of hosting sporting events in the metaverse is determining contractual agreements. Lewis (2022) states that the screening rights of football games are a complex process that requires companies to remain cautious. Bundi and Zehnder (2022) state that it is imperative to understand the contractual agreements and determine who owns them in the metaverse. Furthermore, there is an ambiguity on how contractual agreements can be resolved whenever there are problems. According to Bundi and Zehnder (2022), third-party developers and firms are always involved in the development of applications relevant to the metaverse, but there is a lack of proper laws and regulations to guide such involvement in metaverse operations. There are suggestions that it is imperative to understand this virtual world better to create sustainable regulations (Euronews and Reuters, 2022). At the same time, it is important to determine jurisdiction in the metaverse, which remains challenging (Sparrow, 2021).

Interoperability of the different technologies necessary for the metaverse remains one of the major challenges of the metaverse currently. There are many Distributed Ledger Technologies (DLT), and all are in their infancy, making it more challenging to ensure that they can communicate despite the variations in formats, types, and forms (Xu et al., 2022). Moreover, there is a lack of standards that can be implemented to ensure interoperability and scalability (Xu et al., 2022). Therefore, there is a need for collaboration among the parties involved in the development of metaverse applications. However, bringing these developers together is not easy, considering they have varying interests in the metaverse. Some are companies and organisations interested in expanding their business operations to the metaverse, while others are individuals who are interested in different things, including games, currencies, and other DLT systems.

Another major challenge of the metaverse is the lack of privacy. For example, Uberti (2022) questions whether it is possible to have privacy at all on the metaverse. O'Flaherty (2021) highlights the interests of Meta in the metaverse and their plans to use more sensors to collect detailed information about users, including what they do when they are in the privacy of their own homes. Hunter (2022) supports the hypothesis by indicating that people's bodies will be the new source of data since sensors can collect medical information, among others, which some companies may misuse. Such mistrust and suspicion are rooted in recent scandals involving leading technology companies, including Meta. The company Meta was implicated in the illegal sharing of data belonging to millions of people in the USA and the United Kingdom during the elections of 2016 and the Brexit referendum in the same year (Fuller, 2019). According to Esteve (2017), Facebook and Google are in the business of personal data. They collect personal information and organise it for targeted advertising. Moreover, it is worrying that attempts to restrict marketers' access to consumer information have been unsuccessful (Cluley, 2019). Fernandez and Hui (2022) state that technologies used in the metaverse, such as extended reality (XR), could use biometric data to determine sensitive information. The way people behave when interacting with other avatars and the activities they engage in on the metaverse may also provide clues on other sensitive information that should not be accessed by others (Fernandez & Hui, 2022). Therefore, the privacy issue is a major disadvantage of using the metaverse.

Although the metaverse promises to improve the livelihood of people, it may be limited for the selected few, and be gender-biased. For example, people with fewer means may not be able to afford the technologies that allow access to the metaverse (Franks, 2017). On the other hand, the middle class and the wealthy can afford the technologies associated with the metaverse, such as headsets for augmented reality and virtual reality. These disparities may indicate that the metaverse will exacerbate the existing inequality along the racial and gender lines (Franks, 2017; Stanney, Fidopiastis & Foster, 2020). Moreover, according to Franks (2017), the way the virtual reality sets have been developed is possibly gender-biased. For example, social media scholar Danah Boyd found that these systems have been developed based on motion parallax cues, which are mostly associated with men while women prioritise shape-from-shading (Franks, 2017). These variations are among the reasons why many women felt nauseated when using the VR headsets (Franks, 2017; Stanney, Fidopiastis & Foster, 2020).

CONCLUSION

The advent of the Covid-19 pandemic, which caused a temporary restriction in people's abilities to physically attend sporting events, led to the greater prominence of the metaverse as an important platform for sporting events. The Premier League and La Liga have introduced esports through the FIFA 20 video game, which is popular among football fans, while the first virtual match was held among La Liga teams and members with 170,000 virtual viewers. Metaverse designers can enhance fan experience and engagement by considering the values of different groups and designing the metaverse applications to ensure that fans have a sense of belonging.

However, the clubs and firms that want to extend their operations to the metaverse must address the complex and contentious issues related to contractual agreements, and assess strategically how they can best adjust to a fast-evolving new virtual environment. For example, accessing live matches through the metaverse is not yet possible due to the limited interoperability of various technologies. Furthermore, there is an issue of perceived lack of privacy since some of the firms involved in the development of the three-dimensional virtual world, such as Meta, have been implicated in the misuse of consumer data (Fuller, 2019). Moreover, there is the concern that the current systems used to access the metaverse will exacerbate inequality, and reproduce gender bias.

Despite the challenges, the metaverse has a promising future. The authors of this paper have the view that as the world goes Meta, it is only a matter of time before sporting events follow, culminating in its application in the context of mega sporting events, such as the Olympic Games and the FIFA World Cup.

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