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**From the couch to the grandstand: How “Drive to Survive”
ignited fan passion for Formula One racing.**

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Abstract (English)

Title: From the Couch to the Grandstand: How "Drive to Survive" Ignited Fan Passion for Formula One Racing.

In the sports industry, the barriers to entry have decreased, intensifying competition. Formula One has undergone continuous restructuring with a focus on fan engagement to promote growth and outperform competitors. This thesis analyzes how streaming services impact sports and how they can contribute to better fan engagement, specifically examining the partnership between Formula One and the streaming giant Netflix.

The research employs a mix of quantitative and qualitative methods, including a survey of Formula One fans and interviews with industry professionals. The findings indicate that "Drive to Survive" has significantly extended Formula One's reach, especially among younger audiences and newcomers to the sport. The series has also increased fan engagement, as viewers have gained a better understanding of the personalities and drama behind the races.

Furthermore, the thesis considers the future implications of streaming for fan engagement in the sports industry. The research concludes by discussing the potential for Formula One and other sports to continue to utilize streaming to expand globally and improve fan engagement.

Keywords: Fan Engagement; Formula One; Streaming Services; Netflix; Sports Media.

Author: José Fernandes

Abstrato (Portuguese)

Título: Do Sofá à Bancada: Como "Conduzir para Sobreviver" Acendeu a Paixão do Fã para a Fórmula 1.

Na indústria dos desportos, as barreiras de entrada têm vindo a diminuir, tornando a competição ainda mais acirrada. Na Fórmula Um, tem havido uma reestruturação contínua com o envolvimento dos fãs no centro das medidas estratégicas para promover o crescimento e superar os concorrentes. Esta tese irá analisar o impacto dos serviços de streaming nos desportos e como estes podem contribuir para um maior envolvimento dos fãs. Especificamente, irá examinar a parceria entre a Fórmula Um e o gigante do streaming Netflix.

A pesquisa baseia-se numa combinação de métodos quantitativos e qualitativos, incluindo um inquérito aos fãs da Fórmula Um e entrevistas com profissionais da indústria. Os resultados sugerem que "Drive to Survive" tem sido um catalisador significativo na expansão do alcance da Fórmula Um, especialmente entre os espectadores mais jovens e aqueles que são novos no desporto. A série também aumentou o envolvimento dos fãs, com os espectadores a desenvolverem uma apreciação mais profunda das personalidades e dos dramas por detrás das corridas.

Esta dissertação considera também as implicações para o futuro do streaming e do envolvimento dos fãs na indústria dos desportos. A pesquisa conclui discutindo o potencial para a Fórmula Um e outros desportos continuarem a aproveitar o poder do streaming para expandir globalmente e aumentar o envolvimento dos fãs.

Palavras-chave: Engajamento dos fãs; Fórmula 1; Serviços de Streaming; Netflix; Media desportiva.

Autor: José Fernandes

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1. Introduction

Automobile racing began as soon as the internal combustion engine came into existence in the 1880s. Since then, Formula One, has grown to be widely recognized as the world's most prestigious motor racing competition, as well as the most popular annual sporting series (FIA, 2021). Formula One broadcasts reach millions around the globe, and it has become a multi-billion-dollar industry. The main sources of revenue being broadcasting fees, advertising and sponsorships, race promotion fees and merchandising. Currently the grid consists of a total of 20 cars, 10 teams, each one having 2 drivers. Teams and drivers compete for two titles in each season, Formula One World Drivers' Championship and Constructors' Championship. Formula One racing is part sport, part spectacle and part technological showcase (Formula One, 2022). Constructors refer to companies which design Formula One cars.

After nearly 40 years in the driving seat, Formula One's chief executive Bernie Ecclestone was replaced. This happened when in 2017, Liberty Media, an American company, confirmed the completion of the acquisition of Delta Topco, the company that previously controlled Formula One, from private-equity firm CVC capital Partners for \$4.6 billion. (MotorSports, 2019)

Liberty is investing to expand Formula One through fan engagement, mainly with its digital presence, something the series has struggled with before. Today, Formula One has grown beyond its core audience and has connected with modern millennials. Fan engagement through specific channels such as social media, OTT's (Over-the-top streaming services) and data have now become a priority for Formula One. The partnership between streaming services giant, Netflix, and Formula One, has resulted in the production of the documentary series "Drive to Survive", which has been widely regarded as one of the most innovative and impactful strategies to increase fan engagement in the sports media and entertainment industry (New York Times, 2022)

Fan engagement is a critical aspect of sports marketing and plays a significant role in the success of a sports organization. According to Kim and Trail (2018), fan engagement refers to the interactions and connections between fans and a sports organization through various channels, such as social media, mobile applications, and events. Fan engagement has become increasingly

important for sports organizations to increase their revenue, expand their fan base, and create a strong brand image (Kim & Trail, 2018).

Streaming services have been one of the most significant developments in the media and entertainment industry in recent years. Platforms, such as Netflix, Amazon Prime Video, and Disney+, have disrupted the traditional television and movie industries by offering consumers a more flexible and personalized viewing experience (Chmielewski & Hayes, 2019). With the increasing availability of high-speed internet and advancements in technology, streaming services have become a popular choice for consumers around the world (Statista, 2021). As a result, the market for streaming services has grown rapidly, and it is expected to continue to do so in the coming years (Zacks Investment Research, 2021). The rise of streaming services has changed the way we consume media and has paved the way for new opportunities in the industry.

"Drive to Survive" is a Netflix documentary series that offers an inside look at the events of the Formula One World Championship from the perspectives of teams, drivers, and key figures. The show was first pitched to Formula One by Box-to-Box Films in 2017, with Formula One looking for a way to appeal to a wider audience. The show premiered in March 2019 and covered the 2018 Formula One season, with the second and third seasons covering the 2019 and 2020 seasons respectively (Motorsport, 2019). The show has been praised for its storytelling and access to key figures within the sport and has become an important part of Formula One's marketing and outreach efforts.

This thesis aims to analyze the impact of streaming services on sports and how they can enhance fan engagement. Specifically, it will examine the partnership between Formula One and the streaming giant Netflix, assessing its effect on Formula One's brand image, fan engagement, global reach and the risks and challenges the partnership poses. Ultimately, this study aims to provide insights into the future of sports media and fan engagement, including the challenges and opportunities that lie ahead.

This dissertation begins with a literature review where literature from this specific topic is analyzed and presented. It is followed by a methodology chapter, which describes the methodologies used in this dissertation, the data collection, and the final analysis.

Research Question 1: To what extent has the collaboration between Netflix and Formula One influenced the sport's worldwide reach and fan engagement?

Research Question 2: what are the implications for the future of streaming and fan engagement?

2. Literature Review

2.1. Introduction

This literature review aims to provide a comprehensive analysis of three distinct areas related to Formula One. Firstly, it will examine the Formula One industry, including its history, ownership structure, and revenue structure. Secondly, the review will focus on fan engagement, analyzing the various strategies used by Formula One and other sports organizations to connect with their global audience, such as social media, live events, and interactive platforms. Finally, the review will explore the growing impact of streaming services on sports media and entertainment, including the implications for the future of sports broadcasting and the changing landscape of sports fandom.

The intersection of sports and media has always been a dynamic and ever-evolving field. With the increasing popularity of streaming services and the growth of social media, sports organizations are increasingly collaborating with media companies to enhance their reach and engage new audiences. One such collaboration that has gained significant attention is the partnership between Netflix and Formula One. This literature review aims to examine the extent to which this collaboration has influenced the worldwide reach and fan engagement in Formula One. Specifically, the review will explore the impact of the collaboration on Formula One's global visibility and popularity among fans. Additionally, this review will consider the potential implications for the future of sports media and entertainment. By examining the existing literature on this topic, this review will contribute to our understanding of the impact of media collaborations on sports and provide insight into the future of sports media and entertainment.

2.2. Formula One Industry

2.2.1. Overview

Formula One is a very particular industry, so it is important to analyze and understand how it's structured. This massive billion-dollar industry employs thousands of people around the world. Teams are businesses within the industry, responsible for keeping the sport going. In the same way that Apple and Google are businesses in the Tech industry. Formula One (F1) is the highest class of international auto racing for single-seater formula racing cars. It is sanctioned by the FIA (*Fédération Internationale de l'Automobile*) or the International Automobile Federation (Hutton, 2004). The FIA, established on 20 June 1904, is a non-profit organization and represents the interest of motoring organizations and motor car users. (FIA, 2022)

Over the years, it has taken on a global dimension and is, along with the Olympic Games and the FIFA World Cup, one of the most publicized sporting events worldwide. A Formula One season consists of several races, known as *Grands Prix's* taking place all around the world (Dóra Gréta Petróczy & László Csató, 2021). Currently, 10 teams are competing. Each team has two drivers, meaning a total of 20 drivers. The drivers and constructors accumulate points for each race to attain the annual World Championships, one for drivers, and one for constructors.

How big is Formula One? Today Formula One is valued at USD 17bn The Formula One Group's. It employs around 50,000 people in more than 30 different countries. Fan attendance reached 5.7 million in 2022. (Motorsport, 2023).

It was no secret that Formula One had been struggling for years to attract younger fans and females especially (James Allen, 2021). Bernie Ecclestone previous owner and CEO of Formula One marketing strategy resumed to:

“I'd rather get the 70-year-old guy who's got plenty of cash. So, there's no point trying to reach these kids.” (Bernie Ecclestone, 2015).

There was no marketing strategy at all. Today, Formula One is one of the fastest-growing sports in the world. Since its acquisition by Liberty media, the sport has changed its focus. Formula One is now more digital than ever, having a huge investment in marketing, which simply did not exist in the Bernie Ecclestone era.

Throughout its years of existence, Formula One, has become a pioneer, consistently pushing the boundaries of innovation, all in the name of going faster. For example, Formula One cars have the most efficient engines in the world. Brands such as Mercedes and Ferrari have created some of these innovations and implemented them in their road cars. Now, Formula One has introduced its commitment to developing a new 100% sustainable fuel. (Formula One, 2022)

2.2.2. Ownership Structure

Delta Topco is the parent company of Formula One®, a wholly owned subsidiary of Liberty Media. It holds the exclusive rights to the FIA Formula One World Championship. This means that it oversees the commercial and sporting aspects of the championship, including the negotiation of broadcasting rights, sponsorship deals, and race contracts. (Liberty, 2021).

In the Formula One world championship there are currently 10 teams competing, each one having two cars. These teams are Red Bull, Mercedes, Ferrari, McLaren, Alpine, Aston Martin, Alpha Tauri, Alfa Romeo, Williams, and Haas. The teams are separate entities and are not owned by Formula One®. However, they do have a say in the governance of the sport through the Formula One Teams Association (FOTA), which represents the collective interests of the teams (Liberty, 2021). Every Formula One team has a different ownership structure. Most teams are owned by car manufacturers. (Formula One, 2022)

In addition to the teams, Formula One also has a regulatory body, the *Fédération Internationale de l'Automobile* (FIA), which sets the rules and regulations of the sport, including safety standards and technical specifications for the cars (FIA, 2022)

2.2.3. Revenue Structure

Formula One moves a huge amount of money every year. It is today a billion-dollar industry. Primary revenues are derived mostly from race promotion fees, broadcasting deals, advertising and sponsorship (Liberty Media, 2021). The money generated by Formula One is of extreme importance, as it helps to fund the operations of the sport.

Primary sources of Formula One revenue (Liberty Media, 2021):

- Race promotion fees (Represent 31% of total revenue in 2021) – A Fee venues must pay

to host an F1 Grand Prix and a percentage of ticket sales.

- Media rights fees (Represent 40% of total revenue in 2021) - The price of admission TV networks must pay to have access to television rights, also known as broadcasting fees.
- Sponsorship fees (Represent 16% of total revenue in 2021) – Sponsorship deals.

The remaining percentage of revenue is attributed to other smaller sources, such as Licensing and merchandising.

Each year Formula One's profits are divided into two parts. The first slice goes to The Formula One group and its shareholders. The other half goes to the teams in the form of prize money that is equivalent to 47.5% of the total profits (Essentially Sports, 2021).

A substantial part of the earnings of each team comes from the prize money which is divided in terms of the Concorde agreement. This agreement is a contract between Formula One, governing body the FIA and the teams wishing to compete in the Formula One World Championship. The Agreement defines how F1 prize money will be distributed (Formula One, 2022)

In this agreement it is stated that every team gets an equal share of the Formula One group earnings, more precisely 50% of the prize money (Column 1). In addition to this, the other 50% of the prize money is issued according to the ranking order the team finished in the previous season (Column 2). Meaning that the winner takes the largest share, and the others get less at each step of the ranking. (Total Sportal, 2021) In addition to this there are also special bonuses given to specific teams for a specific reason. One being the LST (long standing team), currently Ferrari is the only team eligible for this bonus, for being the only team that competed in every season since 1950 (The news wheel, 2018)

2.3. Fan Engagement

2.3.1. Overview

Sports Business leaders believe improving fan engagement is vital to the future success of their organizations (Sportsradar, 2021). Sports management research has shown that fan engagement behavior can benefit sports organizations as well as other fans (Yoshida, Gordon, Nakazawa, & Biscaia, 2014). Consumer behavior research has shown that highly engaged customers can

benefit organizations by working collaboratively. Developing and improving product offerings, providing positive word-of-mouth, and engaging with other customers through helping behaviors such as sharing product knowledge and information (van Doorn et al., 2010). This line of research has shown that highly engaged fans are more likely to buy tickets to events, follow the sport on TV, recruit other fans, attend future events together, purchase sport-related merchandise (Bernthal et al., 2015; McDonald & Karg, 2014; Swanson, Gwinner, Larson, & Janda, 2003; Yoshida et al., 2014) and create unique relationships with their favorite teams (Abosag, Roper, & Hind, 2012).

The social exchange theory, proposed by George Homans in 1958, suggests that people engage in relationships with others based on the costs and benefits associated with the relationship. In the context of sports, fans engage in relationships with teams and leagues based on the benefits they receive, such as entertainment, emotional connection, and social identity (Kim & Trail, 2018).

Fans want to feel close to the sport they love, the recent explosion of digital video has given these customers more touch points than ever before, allowing them to go beyond the barstool and highlight reels. Fans engage in different ways on social media through a spectrum of activities, some active and some relatively passive. The Consumers Online Brand Related Activities (COBRA) framework categorizes fan activities as consumption, contribution, and creation (Vale and Fernandes, 2018):

Consumption – The mere viewing of the content shared by others.

Contribution – Activities such as liking, sharing, and commenting on already existing content.

Creation – Involves activities such as posting photos, reviews and using hashtags.

(Dolan et al., 2016)

Engaging fans ensures they remain connected with their favorite sport, team, celebrity driver, and reporting channel. To be successful in this highly competitive marketplace, content producers must dial into these rapidly consumer-oriented preferences. More than ever technology is making the bond fans have with their favorite teams and athletes even stronger. Allowing to create a deeper and more meaningful connection, easier to maintain from a distance. (Bilue, 2022).

As shown social media can fulfill various important preferences. It provides an alternative platform for the clubs to stay in touch with their fans and foster fan relationships by channels that provide platforms where different actors co-create value in a network (Maderer et al., 2018, p. 13). This opportunity has been particularly valuable during the Covid-19 lockdown, when physical contact between sports organizations and their fans were impossible. However, by strengthening the relationships with their fans through social media, these organizations may ultimately succeed in turning the trend around and increase the number of spectators in the stands again. As social media is shown to be an ideal platform to establish and foster long-time relationships, one of the main activities is by having ongoing dialogue with fans creating a sustained fan engagement (Abeza et al., 2013, p. 134).

Social media data also has an indispensable role when it comes to fan engagement. It has an impact on how sport is consumed, whether the individual is at the competition venue or elsewhere. At the NFL SuperBowl 2020 in Miami, fans used more than 10.2 terabytes of data, the equivalent of more than 28 million 'selfies' (sportsradar, 2020). The opportunity to utilize data, to engage more directly with specific audience interests and behaviors, can lead to greater personalization and a richer experience for all concerned. Retaining sports enthusiasts' loyalty and engaging them on a deeper level, thus creating more value

A 2016 study from sports business strategists Geoff Wilson and David Fowler is significant as it defines four key areas where sports organizations should be looking to engage with their fans both inside and outside the venues during event and non-event days: (Fowler & Wilson, 2016)

1. Host fans at sporting venues on non-event day.
2. Connect with fans off site and on non-event days.
3. Enhance the live experience for spectators on event days.
4. Bring fans closer to the live action when they are not on-site.

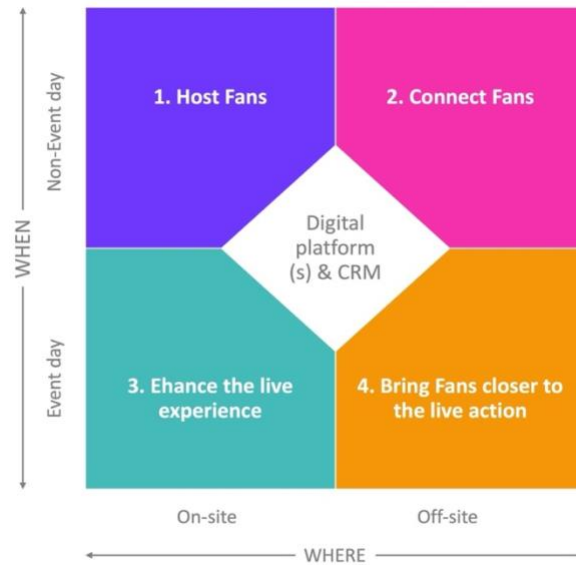


Figure 1 - Four quadrant framework (Fowler & Wilson, 2016)

Fan engagement arises as a lever for sports organizations to diversify the nature of their revenues and consequently increase them, thereby establishing a direct relationship between fan engagement and revenue. In addition, fan engagement also attracts more and better sponsorship deals. A fan has passion which is essential to the success of a sport, and ultimately, in sports, passion drives sales (Greenfly, 2022).

2.3.2. Fan engagement in Formula One

The popularity of Formula One is rising steadily. Formula One aims to engage auto racing enthusiasts with the sport year-round. Their strategy, over the last several years, has been to grow the sports' digital presence and to connect with younger fans. This approach helps Formula One grow through compelling visual assets accumulating every event day but also beyond the races. Leveraging this non-live digital media on social channels drives consumers and increases sponsor appeal. This builds commercial value into their content solutions (Greenfly, 2021)

Liberty Media strategy aims to create fan engagement, giving consumers access to behind the scenes of teams and drivers. Allowing fans to create a relationship with their favorite team and driver, giving the sport and emotional side. In addition, providing consumers with more data gives fans a better understanding of the sport, creating a better fan experience. Having the possibility to solidify casual viewers into regular fans, by utilizing forms of digital outreach that

not only kept the fans entertained, but also educated them about the intricacies of the sport. (The Strategy Story, 2021)

Media is now strategy can be defined as “the online means of communication, conveyance, collaboration, and cultivation among interconnected and interdependent networks of people, communities, and organizations enhanced by technological capabilities and mobility” (Tuten & Solomon, 2017). Prior to the acquisition of Formula One by Liberty Media, there was no activity in social media, drivers were not even allowed to post Formula One related content. Nowadays, the opening of social media has strengthened media drivers has given fans a window into the words of their favorite drivers and teams (The Strategy Story, 2021)

With sports fans consuming content across more platforms than ever before, the importance of data has never been greater for companies involved in the business of sport. More than three-quarters of sports business leaders believe improving fan engagement and delivering new and innovative experiences is vital to the future success of their organizations. In this context, the role of data is indispensable in terms of how sport is consumed, whether the individual is at the competition venue or elsewhere. (Sportsradar, 2019) In the sports industry, data can have two distinctive roles. Firstly, it can be collected and further analyzed, to maximize the understanding of each individual, in order to tailor the sports coverage, product and service offerings accordingly. It also can be used as a tool integrated within sports coverage, to enhance enjoyment and engagement, contributing to a more educated audience encouraging loyalty. (Sportsradar, 2019)

2.4. Streaming Services

2.4.1. Overview

Streaming services have become an increasingly popular form of entertainment in recent years. These services allow users to access a vast array of content, including movies, TV shows, music, and more, from the comfort of their own homes. This convenience has led to a significant shift in the way that people consume media, with many choosing to forego traditional cable TV in favor of streaming services. (PwC, 2021)

One of the key advantages of streaming services is the ability to personalize the viewing experience. Unlike traditional cable TV, which limits viewers to pre-programmed schedules,

streaming services offer a vast library of content that can be accessed at any time. Moreover, many streaming services use algorithms to suggest content that users may enjoy, based on their viewing history and preferences (Forbes, 2022). This highly personalized approach to content delivery has made streaming services incredibly popular with users. In addition to this, another benefit of streaming services is their affordability. Unlike traditional cable TV packages, streaming services offer a range of pricing options to suit every budget (Cnet, 2023). In addition, many services offer free trials or discounted rates for new subscribers, allowing users to test out the service before making a long-term commitment.

Despite this fragmentation, the popularity of streaming services continues to grow. In 2021, the global streaming market size was valued at USD 59.14 billion. and is expected to expand at a compound annual growth rate (CAGR) of 21.3% from 2022 to 2030. The market in 2030 will have an expected value of USD 253.20 billion (Appendix 1) (Grand View Research, 2020). These numbers are testament to the convenience and value that streaming services offer.

The over-the-top (OTT) streaming services with most worldwide subscribers include Netflix (over 230 million), Amazon Prime Video (estimated over 150 million), Disney+ (over 100 million subscribers Hulu (over 41 million subscribers in the US), and HBO Max (over 69 million subscribers) (Statista, 2022). These platforms are also driving content creation. Streaming services are investing heavily in original content to attract and retain subscribers. This has led to a surge in new content, with many of the TV shows and movies being produced exclusively with a certain streaming service. (The Broadcast Bridge, 2018)

Streaming services have had a significant impact worldwide. However, it is in the United States where their impact is predominant. In July 2022 streaming viewership claimed the largest share of TV viewing in the U.S, surpassing cable viewing for the first time. (Nielsen, 2022). As of January 2023, streaming has registered a continued increase, strengthening its position as the top category. Capturing a total of 38.1% of total TV usage. (Nielsen, 2023)

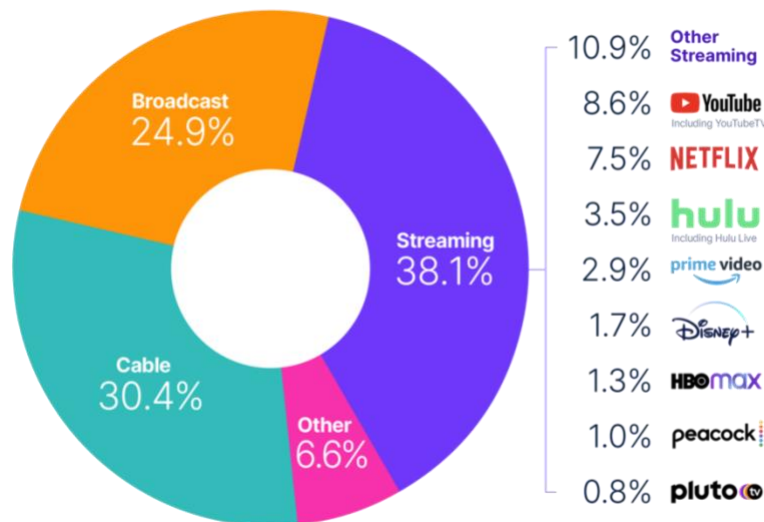


Figure 2 - Total TV viewership percentage breakdown (Nielsen, 2023)

Using the Technology Acceptance Model (TAM) measures user motivations to engage with a certain technology based upon their “perceived ease of use,” “perceived usefulness” and “attitudes”. TAM seeks to explain why people decide to accept or reject a technology (Davis, 1989; Lee et al., 2010). The results confirmed that they found it easy and straightforward to use their smart TVs, smartphones, or tablets to access online streaming services. A study conducted by Camilleri and Falzon (2021) concluded that streaming technologies allowed users to view TV programs and/or recorded videos in a faster way than traditional TV subscriber services or satellite TV. They perceived the usefulness of online TV and/or video streaming services, as they enhanced their experience of watching informative and/or entertainment programs, particularly when they used their mobile devices (Nikou and Economides, 2017; Balakrishnan and Raj, 2012).

2.4.2. Steaming services & Sports

Sports content has a broad appeal across different age groups and genders, making it an extremely valuable asset for Streaming Services platforms seeking to attract a diverse range of subscribers (Nielsen, 2018). According to a report by PwC, the global entertainment and media industry was valued at \$2.34 trillion in 2021, and it is projected to grow at a compound annual growth overall rate of 4.6% to reach \$2.93 trillion by 2023 (Appendix 2)(PwC, 2022). It is estimated that around half the world’s population watches sports with some regularity (Statista, 2023).

Stakeholder Theory suggests that a company should consider the interests of all stakeholders when making decisions. In this context, the stakeholders involved in the integration of streaming services and sports can be identified as customers, sports leagues and teams, streaming service providers and advertisers (Freeman, 2010). Customers are interested in accessing sports content on streaming platforms, which is convenient and affordable. Sports leagues and teams can reach a wider audience through streaming services and generate more revenue from the sale of broadcast rights. Streaming service providers, such as Netflix, Amazon Prime Video, and Disney+, are interested in offering sports content to attract more subscribers and increase their revenue. Finally, advertisers can reach a wider audience through streaming services and sports content (Pedersen & Miloch, 2019).

This sports media industry has traditionally been dominated by traditional broadcasters, who hold the exclusive rights to broadcast live sports events. However, the rise of streaming services such as Netflix, Amazon Prime Video, and Disney+ have disrupted the industry challenging the dominance of traditional broadcasters and creating new opportunities for content creators and distributors (Lotz et al, 2019).

This has led to significant changes in the way that sports content is produced, distributed, and consumed, with implications for stakeholders at all levels of the industry. (New York Times, 2023) Over-the-top (OTT) streaming services have been integrating sports in a variety of ways, revolutionizing the way sports content is consumed and distributed. One of the primary ways OTTs are integrating sports is by acquiring the rights to broadcast live sporting events. For example, Amazon Prime Video and Facebook have both secured broadcasting rights to stream live Premier League matches in the UK (BBC News, 2021). Similarly, DAZN reportedly spends over USD 1 billion annually to secure the rights to broadcast major sporting events such as the UEFA Champions League and the NFL in multiple countries (Wall Street Journal, 2020)

In addition to live sports, OTTs are also integrating sports content through their original programming. Netflix, for example, has invested in producing sports series such as professional auto racing, tennis, and the latest in golf. These documentaries are focused on understanding the sport and telling the stories beyond the leaderboard. This attracts a wider audience and has contributed to the overall growth of the sports media industry. (The New York Times, 2023).

One of the key impacts of streaming services on sports media has been the change in audience behavior, particularly among younger demographics. A study by Deloitte found that younger viewers are more likely to consume sports content via digital platforms, with a preference for on-demand viewing rather than live broadcasts. The study also found that younger viewers are more likely to watch short-form content, such as highlights and clips, rather than full games or events (Deloitte, 2019).

Another way streaming services are integrating sports is through data analytics. With the availability of vast amounts of data, OTTs can provide viewers with detailed statistics, analysis, and interactive features, enhancing the viewing experience. For example, during the 2018 World Cup, Fox Sports partnered with IBM Watson to provide real-time data and insights to viewers through their OTT platform creating a greater fan engagement. (SportTechie, 2018).

Investments in sports have been paying off for these companies, with many reporting significant growth in subscriber numbers and revenue because of their sports content offerings. For example, DAZN reported adding 2.4 million subscribers in 2020, with much of this growth attributed to the company's investment in sports rights, particularly in football (Reuters, 2021). In addition to driving subscriber growth and retention, sports content also has the potential to attract new audiences to streaming services. According to a survey by Deloitte, 56% of U.S. sports fans said they would be willing to subscribe to a streaming service if it offered access to live sports (Deloitte, 2018). This highlights the importance of sports content in attracting new subscribers and retaining existing ones.

Overall streaming services have been beneficial for sports, allowing them to expand their reach, provide a more personalized viewing experience, generate new revenue streams, and gain access to better analytics and data. In turn, the popularity and value of sports content make it a key driver of growth and differentiation for streaming services, providing high-demand content that attracts viewers and generates revenue. As the sports media industry continues to grow, it is likely that streaming services will continue to invest heavily in sports rights and content to remain competitive.

2.4.3. Netflix & Formula One

According to the Resource Dependency Theory (RDT), firms engage in collaborations with external stakeholders to manage their dependency on critical resources. It proposes that organizations that lack certain resources will develop relationships with other organizations with the aim of obtaining those required resources (Ulrich & Barney, 1984).

Netflix is one of the most successful companies in the world, with over 230 million subscribers (Statista, 2023). It is today the biggest OTT (Over the top) platforms in the world (Dacast, 2022). For years, Netflix executives have resisted paying for the rights to carry live sports, even as streaming rivals like Amazon, Apple and YouTube have chased them aggressively. Netflix is instead pursuing a more modest strategy, building out a sports lineup focused on telling the stories beyond the leaderboard and at a considerably smaller cost than for licensing rights to live games. (The New York Times, 2023)

The partnership between Netflix and Formula One began in 2018 when the streaming platform approached the sport's governing body, the FIA, with the idea of producing a documentary series focused on the behind-the-scenes action of the world championship. The series, which would become "Drive to Survive," was seen as an opportunity to showcase the human side of Formula One and reach a wider audience. So, Liberty Media, the new owners of Formula One, signed a multi-year contract including running the series as part of their strategy to increase popularity. Today, the series is already in its fifth season and has become one of the streaming giants' most-watched shows. The series was produced by Box-to-Box Films, which had previously worked on sports documentaries such as "Sunderland 'Til I Die" and "Bobby Robson: More Than A Manager" (Box to Box, 2023)

Drive to survive, gives access to the backstage of a previously notorious secretive sport. The series is not a simple one-dimensional look at who wins or loses races throughout the season. Instead, it excels in creating narratives, allowing viewers to emotionally invest and create a relationship with their favorite drivers, brand or even team principle. This has brought a huge number of new fans to the sport all over the world, people that before watching the series, would not even know which teams competed in the championship (The New York Times, 2021).

In addition to providing Formula One with a wider audience, the partnership with Netflix has also helped the sport to modernize its image and appeal to younger viewers. Formula One had

long been seen as a traditional and conservative sport, with a focus on engineering and technology rather than personalities and emotions. However, "Drive to Survive" has helped to change this perception, by highlighting the human stories behind the sport and showcasing the drivers' personalities and rivalries (The New York Times, 2023)

3. Methodology

3.1. Research Methodology

The methodology used in this dissertation, will be a mixed- methods approach consisting of both a qualitative and quantitative data collection and analysis techniques. There is both primary and secondary data collection. The methodology is critical to the success of the study as it describes how the data will be collected, analyzed, and interpreted. These sources of Data have the objective to solve the problem statement.

3.2. Data Collection

3.2.1. Primary Data Collection

When talking about fan engagement the best way of understanding how it can be a source of competitive advantage and superior performance is to go directly to the source, the fans. In this sense a survey was conducted mostly to Formula One fans, to understand the impact of Fan Engagement Strategies adopted by the Formula One group, especially the series "Drive to Survive". Nationality diversity was attained by posting the questionnaire in multiple Reddit and Facebook groups. Given that these groups were focused on Formula One content, most respondents were already Formula One fans.

The mixed-methods approach used in this study is a valuable tool for researchers as it allows for the triangulation of data from multiple sources. By using both quantitative and qualitative methods, the research can provide a more comprehensive understanding of the research questions and topic of interest. This approach can help overcome the limitations of using a single method of data collection and analysis, as it allows researchers to compare findings from different methods.

The quantitative component of this study involved the use of a survey instrument to gather data from a sample of 200 participants, 28 were excluded due to incomplete answers. The

participants were from 21 countries, being the Portugal (66.4%), United Kingdom (7%) and the United States (3.5%) the most represented nations. The survey was designed to collect both closed-ended and open-ended questions to provide a rich dataset for analysis. The survey was distributed to the target population, Formula One fans, through various online platforms and social media, such as Formula One fan pages. The responses were collected using an online survey tool. The data collected through the survey was analyzed using statistical software to generate descriptive and inferential statistics. These statistics were then used to identify patterns and trends in the data, which helped to answer the research questions.

The qualitative component of this study involved in-depth interviews with two specialists, specialist 1, PhD in Sports Management and expert in the field of Fan Engagement, and specialist 2 worked with Formula One group and is an investor in sports Media and entertainment. The aim of the interviews was to obtain a more nuanced understanding of the research questions and the impact of the Netflix Series “Drive to Survive” on Formula One fans and the future of fan engagement. The interviews were conducted using a semi-structured approach, where participants were asked open-ended questions to encourage a detailed response. The interviews were recorded, transcribed, and finally analyzed.

The combination of both quantitative and qualitative methods in this research project allowed for a more comprehensive understanding of the impact of Netflix series on Formula One fans. The survey data provided a broad overview of the topic, while the interviews with specialists provided a more nuanced and in-depth understanding. The results of this study will contribute to the existing literature. Overall, the mixed-methods approach used in this study provides a rigorous and comprehensive approach to data collection and analysis, which enhances the validity and reliability of the findings.

3.2.2. Secondary Data Collection

Secondary data was largely used to complement data sources in the analysis. It also provides access to a broader range of sources, that were difficult to access through primary data. Analyzing data from multiple sources allowed us to triangulate and strengthen our research findings, providing a more comprehensive understanding of the research topic. Overall, the use of secondary data collection in this thesis can help validate or challenge the results of primary data collection and enhance the rigor and validity of my research.

4. Analysis & Findings

Throughout this dissertation, the key problem was understanding how the collaboration between Netflix and Formula One influenced the sport's worldwide reach and audience engagement. As we have seen the world of sports media and entertainment has undergone a significant transformation in recent years, largely driven by advancements in technology and the ever-growing demand for unique and engaging content (O'Reilly, 2019). As stated, before sports is an area that has seen tremendous growth is the streaming industry, with major players like Netflix dominating the market (Statista, 2021).

One of the most successful series produced by Netflix in recent years is "Drive to Survive," which chronicles the behind-the-scenes drama of the Formula One (F1) racing world (Clarke, 2021). The series has garnered a massive following, leading to questions about its impact on the sport's global reach and fan engagement. This thesis chapter aims to analyze and present the findings of a study that sought to answer the following research questions: How has Netflix's "Drive to Survive" impacted Formula One worldwide reach and fan engagement? What are the implications for the future of sports media and fan engagement? By exploring these questions, we hope to provide insights into the changing landscape of sports media and its impact on the future of sports entertainment.

4.1. Fan Base Growth & Impacts

"Drive to Survive," has had a significant impact on the sport's fan base since its debut in 2019. The show's unique focus on the personalities and behind-the-scenes drama of the sport has helped to bring in new fans and deepen engagement with existing ones. According to a survey conducted by Formula One in 2019, over 70% of viewers of the show who had never watched Formula One races before said that they were more likely to watch it in the future (Formula One survey, 2019). Formula One's president and chief executive, Stefano Domenicali, said:

"It has brought Formula One to a totally different level. We have to be thankful to Netflix, to the production, because they have given us the opportunity to be more popular than we were in the past."

After the launch of the series regular fan usage of social media continues to increase. As in 2020, Formula One was once again in 2021 the fastest growing major sports league on the planet in terms of followers acquired. Followers (across Facebook, Twitter, Instagram (Appendix 3), YouTube, Tiktok, Snapchat, Twitch and Chinese social platforms) grew by 40% to 49.1m. Total engagements grew 74% to 1.5bn, having the highest engagement rate with social posts compared to other major sports in 2021 (Formula One, 2021). The impact of the show has also been reflected in the sport's digital audience. The 2020 season saw a 48% increase in the number of fans watching Formula One on digital platforms compared to the previous year. (Formula One, 2021).

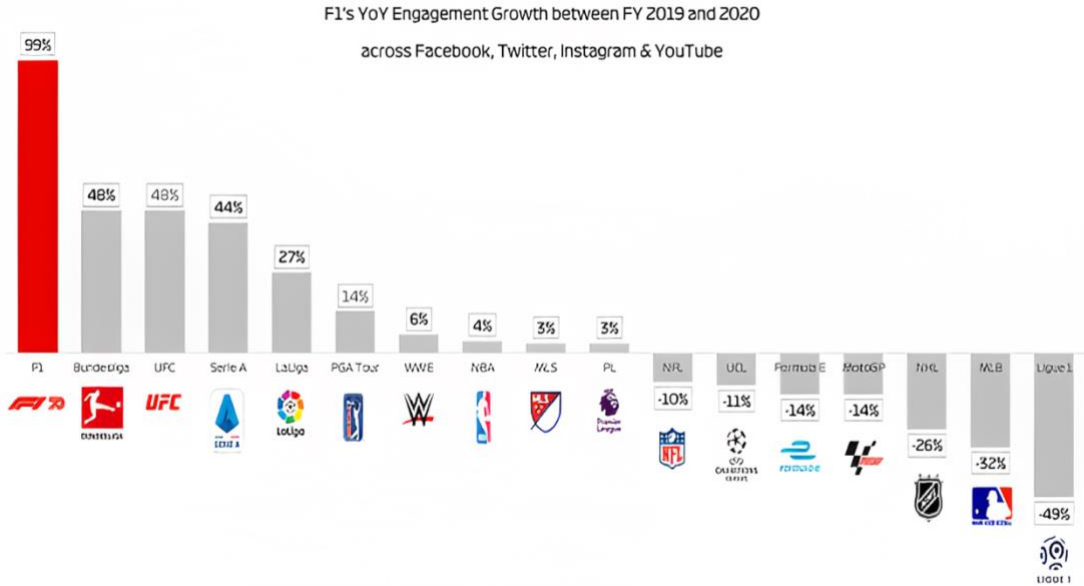


Figure 3 - YoY engagement growth between FN 2019 and 2020 across Facebook, Twitter, Instagram & YouTube (Formula One, 2020)

Recent data also shows that Formula One has experienced a significant increase in the number of active young fans in key European markets, with a 17% year-on-year increase from 17.3 million to 20.1 million. This represents a faster growth rate than football, which only grew by 6% over the same period (The Insights Family, 2021). This growth is largely driven by millennials, who currently make up 77% of Formula One's audience growth, according to Nielsen Sports (2021).

The show's impact has been particularly strong in the United States, where Formula One has traditionally struggled to gain traction (Nielsen Sports report, 2019). A 2019 report by Nielsen Sports found that the show had contributed to a 100% increase in the number of people who

had heard of Formula One in the United States. In addition to this, 50% of U.S. adults who identified as fans of Formula One said they became fans within the past few years (Salesforce, 2023). Zak Brown, McLaren Racing CEO said:

“It’s got to be the single most important impact in North America. Almost every comment you get out of someone out of the U.S., they reference “Drive to Survive.” (Zab Brown, 2021)

The American market has always been challenging for Formula One. It has tried to penetrate this market but never with great success. However, since the launch of “Drive to Survive” in 2021, US cumulative viewership grew 58% (Liberty Media, 2021). In addition to this, the Grand Prix held at the Circuit of the Americas (COTA), registered a world record audience over the race weekend. The attendance of 400 000 fans was the highest ever recorded, this number was up 51% in comparison to 2018. This means beating the previous record of 351 000 fans at Silverstone (ESPN, 2022). In the 2022 season the US hosted two Formula One Grand Prix’s, with a new race around the Hard Rock stadium in Miami, which set a record for the most ever viewed live Formula One Grand Prix in the US, with 2.583 million average viewers. (ESPN, 2022) In addition, it is also confirmed one more race in Las Vegas city center for the 2023 season, making a total of 3 Grand Prix’s in the US (Formula One, 2022).

The show has been renowned as a marketing “silver bullet” by Adam Crothers, Formula One’s head of digital media rights. There is no doubt that it has already had a major impact. ESPN has teamed up with Sky Sports in the US to air races since 2018. In 2021 Formula One viewership set a record average of 949 000 viewers on ESPN, which represented a 53% increase compared to 2020. In 2022 this record was again beaten with an average of 1.21 million viewers per race, a 28% increase over the previous year. The 2022 season also became the first in U.S. television history to average 1 million or more viewers per race (ESPN, 2022).

In addition, Google Trends data for the U.S. shows a steady growth of American interest in the sport since the series launch in 2019, and the interest keeps on growing. In 2022 a 46% increase, was registered at its peak in compared to 2021. In addition, interest in Formula One on Google has now surpassed NASCAR, the most famous motorsport in the United States of America, as shown in Figure 4. (Google trends, 2023)

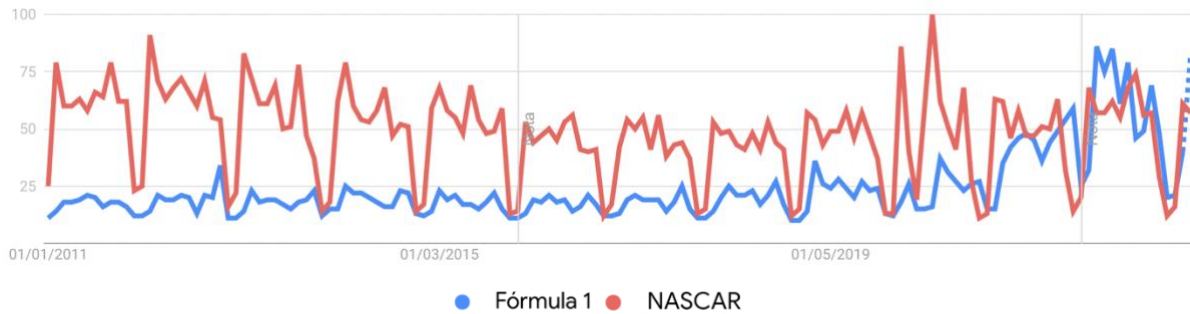


Figure 4 - Google Trends Over the years Formula One vs NASCAR in the U.S.

What are the reasons for this growth?

The first reason given by specialist 2, was the exposure that Netflix gave to Formula One. Netflix has more than 230 million subscribers around the world. The series is available in over 190 countries and has been translated into 32 languages, making it accessible to people all over the world (Statista, 2023). In addition, its ability to recommend content to viewers based on their viewing history, Netflix has helped to expose Formula One to a wider audience. Fans who may not have been previously interested in the sport have discovered Formula One through the platform, and the success of the "Formula One: Drive to Survive" docuseries has helped to draw in these new fans.

The second reason mentioned by both specialists was the storytelling and drama created around the sport. In the context of marketing and branding, emotional intelligence is critical in creating a connection with customers and building brand loyalty (Mayer & Salovey, 1997). The storytelling on the series "Drive to Survive" was pivotal in attracting new fans because it provided a behind-the-scenes look at the personalities and drama within the Formula One world. By highlighting the intense rivalries, high stakes, and personal struggles of drivers, teams, and owners, the show created a compelling narrative that engaged both casual viewers and die-hard racing enthusiasts. Additionally, by showcasing the human side of Formula One racing, the show created a more relatable and accessible image of the sport, which helped to attract a wider audience. Through its expertly crafted storytelling, "Drive to Survive" not only captured the attention of new fans but also elevated the status of Formula One as a whole, making it one of the most exciting and talked-about sports in the world. Like all reality TV, "Drive to Survive" structures its episodes around emotional plotlines. In conclusion, the use of storytelling in

"Drive to Survive" demonstrates the importance of emotional intelligence in marketing and branding (Goleman, 1995; Mayer & Salovey, 1997).

In addition to the two reasons mentioned earlier, the second specialist pointed out a third reason why the series has contributed to greater fan engagement. The specialist noted that the show was produced in a way that educates viewers about the technicalities of Formula One racing, including the aerodynamics of the cars, complexities of tire strategy, and the importance of the power unit. This aspect of the show has been particularly appealing to audiences as it provides detailed explanations of these technical aspects in a way that is easy to understand, even for those who are not well-versed in the sport. The role of education in increasing engagement is supported by Self-Determination Theory. According to Deci, Olafsen, and Ryan (2017), providing opportunities for learning and development can lead to increased engagement. By educating viewers about the technicalities of the sport, the series has not only made it more accessible to a wider audience but also fostered a greater appreciation for the intricacies of the sport. This, in turn, has contributed to a greater sense of engagement and interest among fans.

In conclusion, the success of "Drive to Survive" can be attributed to three key factors: exposure, storytelling, and education. These factors highlight the importance of emotional intelligence, marketing, and branding, as well as providing educational opportunities in increasing engagement and creating loyal fans. Overall, the series has not only entertained but also educated viewers, making it one of the most successful docuseries in recent years.

4.1.1. Increase in Value

According to specialist 1, the primary objective of fan engagement is to enhance the financial performance of the organization by fostering a stronger connection between the fans and the brand, ultimately resulting in increased revenue streams and profitability. This chapter aims to understand the growth in value of Formula One after the series "Drive to Survive".

Formula One's revenue reached \$2.5 billion in 2022 while profits continued to grow as the category moved out of the COVID period that impacted the previous two years. Formula One noted that its key measure of primary revenue rose 14% from \$1.850bn to \$2.107bn, split between race promotion fees (28.6%), media rights (36.4%) and sponsorship (16.9%). (Motorsport.com, 2023). Increase in revenues in Formula One has significant implications for the

teams, as they are entitled to a share of the sport's commercial rights as stipulated in the Concorde Agreement. (Formula One, 2020)

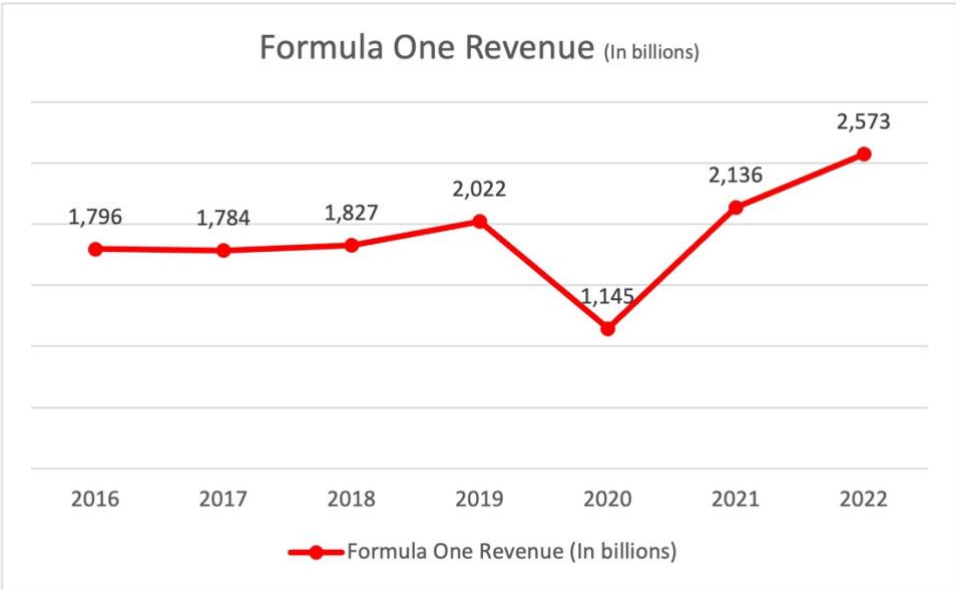


Figure 5 - F1 revenue since Liberty Media acquisition (Liberty Media, 2023)

According to the latest Forbes report on sports team valuations, Liberty Media, the parent company of Formula One, has been named as the most valuable sports empire in the world, with a staggering valuation of \$21 billion (Forbes, 2023). This valuation is primarily driven by the impressive individual value of Formula One, which is estimated to be worth \$17.1 billion.



Figure 6 - Formula One Group (FWONK) Stock

The Formula One growth is clearly visible in the groups (FWONK) stock. It clearly shows a growth tendency over the years. The only exception is the period corresponding to the COVID-

19 pandemic where races were completely suppressed (NASDAQ, 2023). The success of Formula One in enhancing fan engagement and financial performance is a testament to the importance of investing in fan engagement initiatives and continuously modernizing sports for a new generation of fans.

4.2. Disadvantages (risks & challenges)

The Netflix series "Drive to Survive" has been widely popular among Formula One (Formula One, 2020) fans since its release in 2019. However, the show's popularity has also raised concerns about its negative impact on the Formula One fan base.

One of the main criticisms of the show is that it oversimplifies the sport, focusing more on the drama and personal relationships between drivers and teams, rather than the technical and strategic aspects of Formula One racing. Some fans have expressed disappointment that the show does not delve deeper into the complexities of Formula One, which they believe is what makes the sport so fascinating. (BBC Sport, 2020) Furthermore, some fans and even team members have argued that the show misrepresents certain drivers and teams, often portraying them in a negative light or focusing solely on their failures rather than their successes. This has led to concerns about the impact the show may have on the reputations of these drivers and teams, as well as on the overall perception of Formula One as a sport (RaceFans, 2019). In a recent interview, Toto Wolff, team principal at Mercedes, said of Netflix:

“It’s scary how much we let them in,” adding, “They create a spin to the narrative. They put scenes together that didn’t happen.”

Also, world champion Max Verstappen has refused to give further interviews to the series’ producers, questioning their integrity. He said:

“It’s just not my thing, faking rivalries.”

The show's critics have also pointed out that it has resulted in an influx of "casual" fans who are primarily drawn to the drama and entertainment value of Formula One rather than the sport's technical and strategic aspects. This new audience may lack a deeper understanding of the sport and may be less likely to stay committed to it in the long run (FormulaSpy).

On the other hand, Hyper-engaged fans can be a double-edged sword for Formula One. While they are highly passionate and committed to the sport, they can also pose significant risks and challenges. Specialist 1 highlighted that these fans can engage in risky and sometimes violent behavior, both online and in-person, which has led to several incidents at Formula One events, such as the throwing of objects onto the track and confrontations with drivers and team members (ESPN, 2022)

In addition to the risks of hyper-engaged fans, specialists 1 and 2 also identified the challenge of meeting the demands of more engaged fans who expect more engaging content. However, long-term fan engagement also poses a risk of burnout. Research by Wann and Branscombe (2010) suggests that individuals who identify strongly as fans may experience burnout due to the high level of emotional and time investment in their fandom. This can result in decreased engagement or even disengagement from the sport over time. To mitigate this risk, organizations must balance fan engagement efforts with the need to prevent fan burnout.

Finally, some fans have expressed concern that the show's popularity may lead to a shift in the focus of Formula One racing, with teams and drivers prioritizing the entertainment value of the sport over its technical and strategic aspects. This could ultimately result in a decline in the quality of Formula One racing and a loss of interest among dedicated fans. (The Guardian, 2020)

As Formula One's "Drive to Survive" continues to gain popularity, it has sparked a debate about its impact on the sport. While it has undoubtedly attracted new fans and increased visibility, it has also raised concerns about the risk of burnout for hyper-engaged fans and the potential for a shift in focus towards entertainment value over technical excellence. To maintain the integrity and appeal of the sport, it will be important for Formula One stakeholders to find a balance between these factors. Therefore, it is necessary to address the concerns of existing fans and to continue to attract new ones, without sacrificing the technical and strategic aspects of Formula One racing.

4.3. Future of Sports & Streaming

The future of sports and streaming is looking very promising. As the world becomes more connected and technology advances, people are increasingly turning to streaming services to watch their favorite sports teams and events. The growth of the OTT market has been predicted

to be a major factor in this trend, with the global OTT market expected to grow at a compound annual growth rate of 16.7% between 2020 and 2027 (Appendix 1) (Gand view research, 2020). Following the lead of Formula One and Liberty Media, the PGA, WTA, and ATP are creating docuseries for Netflix (Appendix 4). Streaming offers several advantages over traditional television broadcasts, including greater flexibility and convenience, lower costs, and a wider range of options.

As streaming services and digital platforms continue to grow in popularity, Formula One and other sports organizations will need to leverage these channels to reach younger audiences and keep pace with changing viewer preferences. Salesforce Connected Customer report highlights the growing trend of digital engagement among millennials, with 65% of them preferring to engage with brands through digital channels (Salesforce, 2021). This suggests that the future of sports and fan engagement is likely to be digital, with streaming services and online platforms playing a crucial role in attracting and retaining young viewers.

One major trend, mentioned by specialist 2, is the increasing use of interactive and personalized content to engage fans and foster a sense of community among them. Studies have shown that interactive and personalized content can increase fan engagement and loyalty by providing a more immersive and tailored experience (Jih et al., 2010). In addition to this, is the growing importance of data analytics and artificial intelligence in optimizing streaming content and engaging fans. By analyzing user data, streaming platforms can tailor content recommendations to individual viewers and identify emerging trends and interests (Chen et al., 2012). Similarly, artificial intelligence can be used to create more personalized and engaging experiences, such as chatbots and virtual assistants that can provide real-time assistance and recommendations to fans (Gandomi & Haider, 2015).

The traditional model of broadcasting rights and advertising revenue is being disrupted by new revenue streams, such as direct-to-consumer subscriptions and e-commerce (Sanderson & Hutchins, 2018). Streaming platforms are well-positioned to take advantage of these new business models by offering new ways to monetize content and engage fans. As the number of streaming options continues to grow, consumers will have more choices than ever when it comes to watching sports. This could lead to a fragmentation of the sports viewing audience, as fans may choose to watch games on different platforms depending on their preferences and

interests. However, it could also lead to increased competition between platforms, which could drive innovation and improvements in the quality of the viewing experience.

In conclusion, the future of sports and streaming looks promising, with the continued growth of OTT platforms, the increasing popularity of streaming services, and the recognition of the potential of streaming by sports leagues and broadcasters. To take full advantage of this trend, sports organizations will need to leverage these channels to reach younger audiences and keep pace with changing viewer preferences. By adopting new technologies and business models, sports organizations can ensure they stay competitive in an increasingly digital world.

4.4. Survey

The survey aimed to address the gap in the literature by investigating how fans of the series perceive the sport and how their engagement with "Drive to Survive" may have influenced their interest in Formula One. Ultimately, the results of this survey can help to shed light on the impact of the Netflix Formula One collaboration and provide insights into how streaming services and digital platforms can be leveraged to expand the global reach of sports organizations. By exploring the impact of "Drive to Survive," this research contributes to the ongoing discussion about the relationship between sports and media, and how emerging technologies and platforms can be used to engage with fans around the world.

After watching "Drive to survive" are you more engaged in F1?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	37	21,5	31,1	31,1
	Yes	82	47,7	68,9	100,0
	Total	119	69,2	100,0	
Missing	System	53	30,8		
Total		172	100,0		

Table 1 - Respondents perceived impact of the impact of watching "Drive to Survive" on their engagement.

Based on the data, from n=172 respondents, 81 watched the entire series "Drive to Survive" which accounts for 47.1% of the total respondents. 42 of the respondents watched parts of it which accounts for 24.4% of the total respondents. On the other hand, 39 respondents have never watched the series, which accounts for 22.7% of the total respondents.

Have you watched the Netflix series "Drive to Survive"?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never watched	39	22,7	24,1	24,1
	Watched parts of it	42	24,4	25,9	50,0
	Watched the entire series	81	47,1	50,0	100,0
	Total	162	94,2	100,0	
Missing	System	10	5,8		
Total		172	100,0		

Table 3 - Respondents viewership of the Netflix series "Drive to Survive".

The results from Table 2, show that most respondents (68.9%) reported that they were more engaged in Formula One after watching “Drive to Survive”, while 31.1% reported that they were not. This suggests that the "Drive to Survive" series had a positive impact on the engagement of viewers with Formula One.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	10,054 ^a	1	,002		
Continuity Correction ^b	8,768	1	,003		
Likelihood Ratio	9,791	1	,002		
Fisher's Exact Test				,003	,002
Linear-by-Linear Association	9,969	1	,002		
N of Valid Cases	119				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 12,44.

b. Computed only for a 2x2 table

Table 5 - Chi - Square test between "Have you watched 'Drive to Survive'?" and "Are you more engaged in F1 after watching the series?"

Table 3 indicates that there is a statistically significant relationship between the variables "Have you watched the Netflix series 'Drive to Survive'?" and "After watching 'Drive to Survive' are you more engaged in F1?" (Pearson Chi-Square = 10.054, df = 1, p < .01). This suggests that watching the series is associated with increased engagement in Formula One. The linear-by-linear association test also shows a significant relationship between the variables (p < .01). The other statistical tests (Continuity Correction, Likelihood Ratio, Fisher's Exact Test) also show significant results (p < .01 or p < .05), indicating that the relationship between the variables is unlikely due to chance.

Correlations

		Which percentage of races do you watch live? - .	Have you watched the Netflix series "Drive to Survive"? ^a	On a scale from 0 to 7, how much an F1 fan do you consider yourself to be? - .
Which percentage of races do you watch live? - .	Pearson Correlation	1	,165	,783**
	Sig. (2-tailed)		,071	<,001
	N	126	121	126
Have you watched the Netflix series "Drive to Survive"?	Pearson Correlation	,165	1	,500**
	Sig. (2-tailed)	,071		<,001
	N	121	162	158
On a scale from 0 to 7, how much an F1 fan do you consider yourself to be? - .	Pearson Correlation	,783**	,500**	1
	Sig. (2-tailed)	<,001	<,001	
	N	126	158	165

** . Correlation is significant at the 0.01 level (2-tailed).

Table 7 . Correlation between 3 variables: "Which percentage of races do you watch live?", "Have you watched the Netflix series 'Drive to Survive'?" and "On a scale from 0 to 7, how much of an F1 fan do you consider yourself to be?"

Overall, table 4 suggests that there is a strong positive relationship between how much of a Formula One fan someone considers themselves to be and the percentage of races they watch live ($r = 0.783$, $p < 0.001$). Additionally, there is a positive relationship between watching "Drive to Survive" and considering oneself a Formula One fan, but this relationship is not as strong as the relationship between watching live races and being a fan.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,693	,354		7,601	<,001
	Which percentage of races do you watch live? - .	,037	,003	,759	12,851	<,001
	Have you watched the Netflix series "Drive to Survive"?	,155	,122	,075	1,268	,207

a. Dependent Variable: On a scale from 0 to 7, how much an F1 fan do you consider yourself to be? - .

Table 9 - linear regression model examining the relationship between F1 fan engagement and two predictor variables: "Which percentage of races do you watch live?" and "Have you watched the Netflix series 'Drive to Survive'?"

Table 5 shows the coefficients of the variables in the regression model. The constant coefficient (2.693) represents the predicted mean value of the dependent variable (fan engagement score) when all the independent variables (percentage of races watched live and whether the respondent watched "Drive to Survive") are equal to zero.

The coefficient for "Which percentage of races do you watch live?" (.037) indicates that for every one-unit increase in the percentage of Formula One races watched live, the fan engagement score increases by .037 units, holding all other variables constant. The standardized coefficient (beta) of .759 indicates that the percentage of races watched live has a strong positive effect on fan engagement score. The coefficient for "Have you watched the Netflix series 'Drive to Survive'?" (.155) indicates that for every one-unit increase in whether the respondent watched the series, the fan engagement score increases by .155 units, holding all other variables constant. However, the coefficient is not statistically significant ($p = .207$), which means that there is not enough evidence to conclude that this variable has a significant effect on fan engagement score.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	33,668 ^a	14	,002
Likelihood Ratio	33,905	14	,002
Linear-by-Linear Association	24,054	1	<,001
N of Valid Cases	152		

a. 16 cells (66,7%) have expected count less than 5. The minimum expected count is 1,26.

Table 10 - Chi-square between respondents who watched "Drive to Survive" and their interest in attending Formula One race events

When conducting a chi-square analysis (Table 6), we observed that there is a significant association between the variables "watched Drive to Survive" and "interest in attending race events". The Pearson chi-square value is 33,668 with 14 degrees of freedom, and the p-value is .002. The likelihood ratio test also shows a significant association with a chi-square value of 33,905 and a p-value of .002. Furthermore, the linear-by-linear association test indicates a significant linear trend between the two variables with a chi-square value of 24,054 and a p-value of less than .001. Overall, based on the results of the chi-square analysis, there is evidence to suggest that there is a significant association between whether respondents watched "Drive to Survive" and their interest in attending race events.

In conclusion, the survey conducted aimed to investigate how fans perceive the sport and how their engagement with "Drive to Survive" has influenced their interest in Formula One. The results of the survey showed that the majority of the respondents reported being more engaged in Formula One after watching the series. However, the relationship between watching "Drive

to Survive" and fan engagement score was not statistically significant, with a small sample size, the variability in the data may be too large to detect a significant relationship between the variables, even if one exists in the population. The survey also indicated that there is a strong positive relationship between how much of a Formula One fan someone considers themselves to be and the percentage of races they watch live. These findings can help to shed light on the impact of the Netflix Formula One collaboration and provide insights into how streaming services and digital platforms can be leveraged to expand the global reach of sports organizations.

5. Conclusion

This chapter provides a comprehensive summary of the dissertation's key findings, including its limitations and potential avenues for future research.

5.1. General Conclusions

Despite the clear growth of Formula One there is still a general lack of theoretical studies on the impact of the Netflix series "Drive to Survive". However, the findings of this dissertation, demonstrate the significant impact of the collaboration between Netflix and Formula One on fan engagement. The documentary series "Drive to Survive" has rebranded Formula One as a more accessible and relatable sport, leading to increased popularity and revenue for the sport. The series has also highlighted the importance of storytelling in engaging fans, with a focus on the personal narratives of individual drivers and teams. This has helped to attract a younger and more diverse audience, increasing the sport's popularity in previously untapped markets, the most significant being the United States. This has led to an increased engagement in the sport (Stern, 2020).

Moreover, the analysis of the qualitative data has revealed that the series has contributed to increased engagement among Formula One fans (70% of respondents). This is in line with the Self-Determination Theory, which suggests that providing for learning opportunities and development can lead to increased engagement (Deci, Olafsen, & Ryan, 2017). As such, this study supports the view that "Drive to Survive" has been instrumental in engaging fans in a sport that had previously been perceived as exclusive and inaccessible. Additionally, although the partnership between Netflix and Formula One has made a global impact, its significance was especially evident in the United States.

The success of the Netflix and Formula One collaboration provides important implications for the future of streaming and fan engagement. This relationship has proved to be a successful strategy for engaging fans, particularly younger and more diverse audiences. As streaming platforms continue to grow in popularity, there is a growing demand for sports content that is accessible and engaging. The success of "Drive to Survive" suggests that collaborations between streaming services and sports organizations can be mutually beneficial, leading to increased revenue and fan engagement for both parties. However, Given the ever-evolving digital landscape, it is imperative for sports organizations to adapt to changing viewer preferences and leverage online platforms, while continuously embracing new technologies and innovative business models, in order to remain competitive and thrive.

5.2. Limitations and Future Research

This study has several limitations. One limitation is that the sample size of the survey is relatively small, with only 172 respondents. This could limit the generalizability of the findings to the wider population of Formula One fans. Additionally, the sample may not be representative of the entire Formula One fan base, as respondents were recruited through social media platforms and may not be a random sample. Regarding sampling, the younger (<18) segment has 4 observations, respectively. Given that "much less than 40 observations in length are not likely to be adequate and statistically significant" (Ashley, 2003), there may be an untruthful representation of these groups' true behavior.

Furthermore, the survey only focused on the impact of "Drive to Survive" on fan engagement and did not explore other factors that may influence viewers' interest in Formula One, such as the quality of the races or the performance of their favorite drivers or teams.

The primary limitation of answering the first research question in this thesis was the availability of reliable data. While there is a wealth of information on the collaboration between Netflix and Formula One, determining the extent of its influence on the sport's worldwide reach and fan engagement is challenging. The study would require an extensive analysis of data from various sources, including Netflix and Formula One, to determine the impact of the collaboration. However, obtaining access to data from both companies was very challenging, and the data that is available may not be comprehensive or accurate.

Another limitation is the complexity of the variables involved. The collaboration between Netflix and Formula One is a multi-faceted partnership, and isolating the impact of one aspect of the collaboration from another can be difficult. For example, determining the impact of the collaboration on fan engagement would require an understanding of how fans engage with the sport, including their viewing habits, social media activity, and attendance at live events. The study would also need to consider the impact of other factors that may influence fan engagement, such as the competitiveness of the sport and the quality of the racing.

The primary limitation of answering the second research question in this thesis was the complexity of the topic. The future of sports media and fan engagement is a rapidly evolving area that is influenced by many factors, including technological advancements, changes in consumer behavior, and the competitive landscape. It is challenging to predict the implications of these factors accurately, and any study would need to consider a broad range of variables and potential scenarios.

In addition, another limitation of this thesis project was the limited timeframe available for research. The future of sports media and fan engagement is a multifaceted and long-term subject, which requires continuous observation and analysis. Therefore, any study, including this one, can only provide a snapshot of the current situation. It is crucial to acknowledge that the potential impact of certain factors may not become apparent for many years, making it challenging to draw definitive conclusions. Despite these limitations, this study provides valuable insights into the current state of sports media and fan engagement and can serve as a foundation for future research in this field.

Future research could further investigate the long-term effects of the collaboration between streaming platforms and sports organizations on fan engagement and sport popularity. While initial findings suggest positive impacts, it would be valuable to explore the sustained effects and any potential limitations or challenges to the success of this collaboration. Additionally, further research could explore the effects of streaming platforms on various types of sports and examine specific factors that determine the success or limitations of streaming in different contexts. Understanding these factors could inform strategies for maximizing the potential benefits of streaming in the sports industry.

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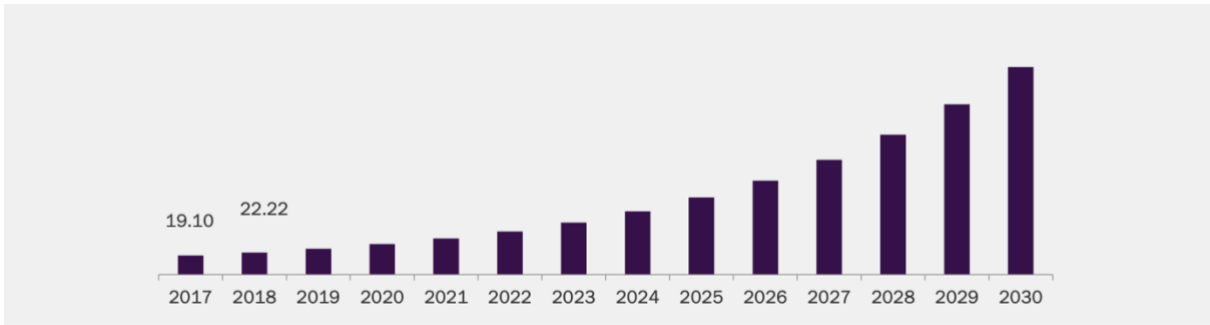
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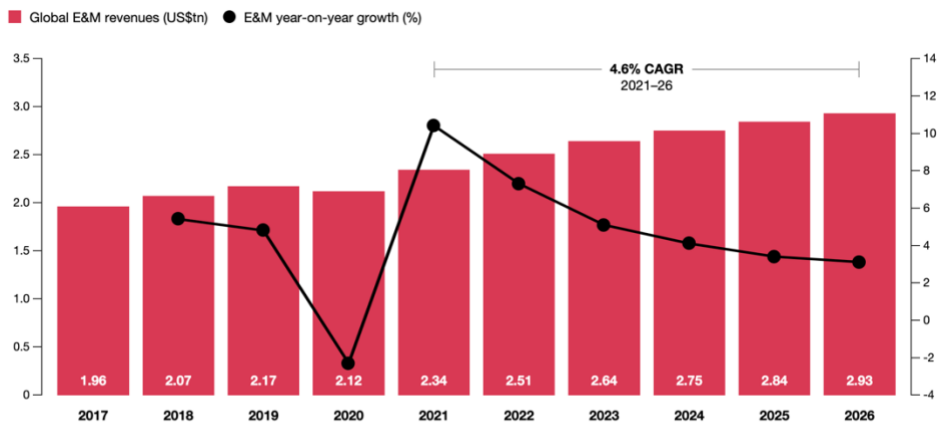
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7. Appendix



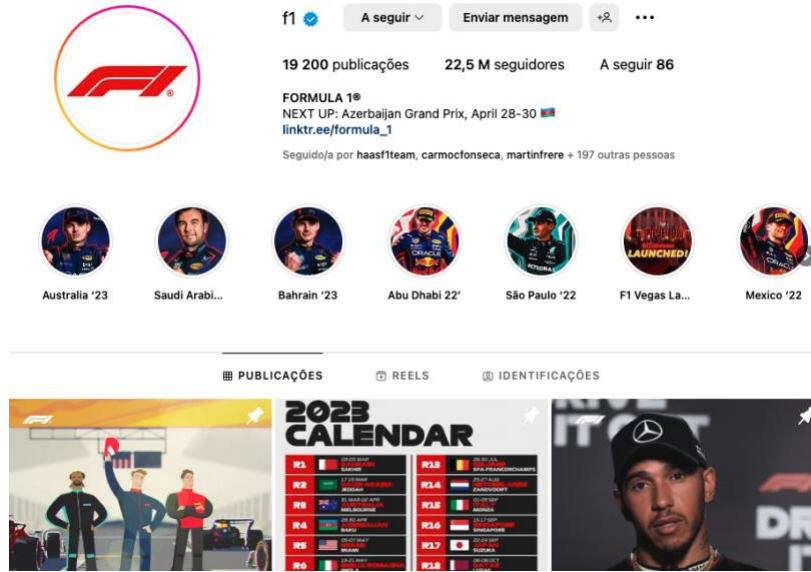
Source: Company Annual Reports, Telecom Regulatory Authority of India (TRAI), Internet World Statistics, Our World in Data, ITU, Primary Interviews, and Grand View Research

Appendix 1 - Video Streaming Market Estimates and Forecasts, 2017-2030 (USD Billion) (GrandViewResearch, 2020)



Note: 2021 is the latest available data. 2022-2026 values are forecasts.
Source: PwC's Global Entertainment & Media Outlook 2022-2026, Omdia

Appendix 2 - Global E&M industry projected growth (PWC, 2022)



Appendix 3 - Formula One Instagram Page (Instagram, 2023)



Appendix 4 - Netflix Sport Documentaries (Own Development)