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## **Platform of Growth: An Analysis of Earnings and Social Media Engagement Among Esports Athletes**

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PLATFORM OF GROWTH: AN ANALYSIS OF EARNINGS AND SOCIAL MEDIA  
ENGAGEMENT AMONG ESPORTS ATHLETES

by

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## DEDICATION

For Mir. My toughest critic, and my biggest fan. The woman with the wild side and most amazing grace. Not a day goes by without a fond memory of you. I utilize the strength you have instilled in me to put my best foot forward and I hope I continue to make you proud. I love and miss you.

## ACKNOWLEDGEMENTS

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## ABSTRACT

Esports consists of online gaming, cyber sport, and virtual sport in a highly competitive environment. The industry has grown tremendously over the last 30 years (Leroux-Parra, 2020). Professional esports competitions are often now contested with a large scale, global audience, and millions of dollars potentially at stake in some competitions. Hundreds of esports athletes earn a living from the multi-billion-dollar esports industry. In addition to players earning salaries and prize pool money in a professional setting, many colleges have offered scholarships to enrolled students and have begun to offer esports-related curriculums (Dominguez, 2022). Networks such as ABC, ESPN, and TBS have broadcasted prominent esports tournaments and other esports-related content (Smith, 2021). Most importantly, esports tournaments have created a platform for a highly competitive environment, and from a financial standpoint, esports has created monetary opportunity from elite sponsorships for players, teams, and events.

The esports industry grew to \$1.22 Billion in 2021 and is projected to expand tremendously over the next decade (Gough, 2022). Spectatorship both via streaming and in-person attendance has also increased. Contributing to this growth is sponsorship and social media engagement. Sponsorships specifically have played a significant role in contributing to large pay-out prize pools at tournaments (Meola, 2023). Sponsorships are

critical to the overall esports ecosystem as they support tournaments/gameplay as well as individual esports athletes. Currently, there is a lack of comprehensive data regarding many elements of esports sponsorships because much of the company investment in partnerships has occurred at the team and event level. However, large tournament prize pool information is often publicly available via websites such as Esports Earnings.com.

Prize pools from tournaments are funded by large sponsors, and thus sometimes offer thousands of dollars in prize money. In some cases, the prize pool for a prominent tournament, such as The International for the game *Dota 2*, can exceed multiple millions of dollars (Webb, 2019). Other games tend to be in the thousand-dollar range. Even though there are potentially millions of dollars in prize money available and there are usually not any formal restrictions on participating players by gender, a large prize money compensation gap has developed. In 2023, among the 500 top prize winners, 499 were male and one was a female, Sasha Hostyn (Esports Earnings, 2023).

The gender pay gap from tournament winnings is not reflective of the overall esports participation rate. Though 99% of the top five hundred esports earners are male, the overall participation rate is 45% female (Entertainment Software Association, 2022). Multiple studies have looked at the motivators behind esports athletes and their participation in game play, but there is currently minimal data explaining why there is a gender pay gap, despite the 45% female participation rate.

There are several reasons mentioned by scholars why males are prominent in professional gaming, such as industry structure, tournament entry and in-game female character representation (Yokoi, 2021). However, one area that has few barriers to entry

is the social media landscape, a place where female esports athletes have thrived, despite the other mentioned restrictions into the highest levels of esports.

Esports athletes have the freedom and flexibility to engage with their fans on social media and can often gain direct monetary compensation from such engagement by fans donating money for their activities. Platforms like *Twitch* have given esports athletes the ability to gain followership and earn money from their subscribers. In addition, the social media platform *Twitter* has been identified as the centralized medium for esports athletes and fans (Red Bull, 2016).

The purpose of this study is to compare social media engagement of the top esports earning male and female athletes. Earnings data is already publicly posted, and there is a clear disparity of earnings between male and female esports players. Utilizing the earnings data, the goal was to correlate male and female esports athletes' activity on social media platforms via an analysis of social media engagements (i.e., posts, followers, likes, retweets, etc.).

Specifically, a determination was made to investigate whether it is more likely that top earning female esports players engage their fans via social media than their male counterparts. The following research questions were developed:

RQ1: Does esports athletes' social media engagement relate to their earnings?

RQ2: Does the relationship between engagement and earnings differ based on gender?



Quantifying social media engagements among esports athletes can lead to an understanding why esports athletes engage in social media, as it is known as a primary communication platform in the industry. In addition, how sponsors and industry leadership alike can capitalize on these engagements can be better understood. Understanding social media activity engagement and earnings can lead to further research to better understand esports athletes' social media activities.

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## CHAPTER 1

### INTRODUCTION

Esports consist of online gaming, cyber sport, and virtual sport in a highly competitive environment. The industry has grown tremendously over the last 30 years (Leroux-Parra, 2020). Professional esports competitions are often now contested with a large scale, global audience, and millions of dollars potentially at stake in some competitions. Hundreds of esports athletes earn a living from the multi-billion-dollar esports industry (Esports Earnings, 2023). In addition to players earning salaries and prize pool money in a professional setting, many colleges have offered scholarships to enrolled students and have begun to offer esports-related curriculums (Dominguez, 2022). Networks such as ABC, ESPN, and TBS have broadcasted prominent esports tournaments and other esports-related content (Smith, 2021). Most importantly, some esports tournaments have created a platform for a highly competitive environment, and from a financial standpoint, esports has created monetary opportunities from elite sponsorships for players, teams, and events in addition to individual prize money.

The esports industry grew to \$1.22 billion in 2021 and is projected to expand tremendously over the next decade (Gough, 2022). Spectatorship both via streaming and in-person has also increased. Further, sponsorship has played a significant role in contributing to large pay-out prize pools at many tournaments (Meola, 2023).

Sponsorships are critical to the overall esports ecosystem as they support

tournaments/gameplay as well as individual esports athletes. However, despite their importance, there is a lack of comprehensive data regarding many elements of how esports athletes earn money. While there is comprehensive prize pool data available on websites such as Esports Earnings, individual earnings of esports athletes outside of tournament winnings is not publicly available (Esports Earnings, 2023) Additionally, the tournament landscape is predominately male.

Prize pools from tournaments are significantly backed by large sponsors, and thus sometimes offer thousands of dollars in prize money. In some cases, the prize pool for a prominent tournament, such as The International for the game *Dota 2*, can exceed multiple millions of dollars (Webb, 2019). Even though there are potentially millions of dollars in prize money available and there are usually not any formal restrictions on participation by gender, a large prize money compensation gap has developed. In 2023, among the 500 top prize winners, there were 499 males and on only one female: Sasha Hostyn (Esports Earnings, 2023). Thus, female esports athletes have not achieved the same tournament earnings and may also not have earned as much through sponsorship.

The gender pay gap from top tournament winnings is not reflective of the overall esports participation rate. Though 99% of the top 500 esports earners are male, the overall participation rate of video game players is 45% female (Entertainment Software Association, 2022). Therefore, large numbers of females are playing video games, but are not reaching the highest level of player achievement measured by tournament winnings. Numerous studies have looked at the motivators for esports athletes and their participation in game play, but additional research is needed to fully understand why there is a large gender pay gap for the top players when the overall video game

participation rate is 45% female. Undoubtedly, female esports athletes are active in the esports community, especially on social media. However, additional data is necessary to determine how esports players, specifically females, utilize social media to capitalize on career growth.

Scholars have speculated there are not many top-achieving professional female esports athletes because of industry structure, an alleged sexist and hostile online environment, in-game female character representation, and other potential issues (Yokoi, 2021). However, though there may be structural barriers and/or environmental hindrances for females in the gaming environment, the social media environment offers an opportunity for female esports players to fully engage with their fans without any need to be directly or indirectly supported by fellow players, team owners, tournament organizers, etc.

Esports athletes have the freedom and flexibility to engage with their fans on social media and can often gain direct monetary compensation from such engagement by fans donating money for their activities. Platforms like *Twitch* have given esports athletes the ability to gain followership and earn money from their subscribers. In addition, the social media platform *Twitter* has been described as the centralized medium for esports athletes and fans (DeGuzman, 2016). Given the open environment for social media engagement, an understanding of the actions of prominent esports professionals in this space is warranted. Further, utilizing *Twitter* for social media engagement measurement is attainable as the platform displays real time data regarding both professional esports players and content creators or influencers, those who do not necessarily compete at major tournaments, but digitally share game play and other content with a large-scale

audience. Content creators can often be as popular or more popular than professional esports players who earn far more money from “competing” than content creators.

The purpose of this study was to compare social media engagement of the top of the top 40 male and top 40 female esports athletes. Esports earnings data indicates there is a clear and wide disparity of earnings between top male and female esports players, but this study focused on male and female esports athletes’ social media activity, specifically social media engagements on the social media platform *Twitter*.

Specifically, a determination was made whether the top earning female esports players engage their fans via social media more than their male counterparts. The following research questions were developed:

RQ1: Does esports athletes’ social media engagement relate to their earnings?

RQ2: Does the relationship between engagement and earnings differ based on gender?

Quantifying social media engagements among esports athletes can lead to a better understanding of how esports athletes engage on social media, as it is known as a primary communication platform in the industry. Additionally, understanding when and how social media is utilized by esports players can help increase sponsor and industry leader understanding of a vital area of the esports industry. Upon review, there was a lack of literature concerning how female esports athletes utilize social media communities to gain notoriety and success in their careers. For instance, when reviewing esports research on gender, Rogstad (2022), found that most of the literature focused on masculinity, online harassment, and gender expectations. Kramer and Wolf (2022) conducted a



qualitative study with similar indicators of environmental issues affecting female esports athletes. Although these contributions are beneficial to the esports industry, further research investigating female esports players, their involvement in professional tournaments and their online activities is warranted. Social media is an important part of the esports ecosystem and one where players can engage with fans without the need for coaches, owners, and other stakeholders.

## CHAPTER 2

### LITERATURE REVIEW

As the industry has expanded research in esports has been conducted across an array of academic disciplines (Reitman et al., 2019). There is a concentration of research in media studies, especially that of online streaming, as the esports industry exists in a technological landscape. Made possible by the digital and physical spaces (i.e., tournaments), esports has expanded throughout the globe (Reitman et al., 2019). Many media studies have focused on qualitative feedback and community engagement among esports athletes. Additionally, observation has been conducted on spectatorship and how consumers engage in the esports industry. However, there is a lack of information discussing the player-fan relationships within the esports community. Further, there is a lack of information investigating how esports athletes utilize their personal social media platforms to engage with their fans, and whether there is a difference in engagement among the type of esports athlete (i.e., gender).

The growth of esports has gained the attention of scholars and research analysts to determine how and why esports athletes' market themselves; however, additional scholarly research including analysis of actual earnings beyond prize pools is warranted. Undoubtedly, social media platforms play a distinct role in this analysis as they are a communication tool that athletes can easily access regardless of their team employment. Fan engagement can contribute to the financial success of esports athletes potentially as much as prize pool money earned.

There is a distinct difference between esports content creators or influencers and competitive players (those who likely gain followership by their excellence in competitive game play). At times, these players overlap in categories. For example, Johan Sundstein, the top *Dota 2* player, has a net worth of nine million dollars (Boss Net Worth, 2023). Pokimane (real name Imane Anys) is a notable *Twitch* streamer, but she does not rank high (#39 as of June 2023) regarding tournament play earnings, but she has a net worth of \$25 million (Brown, 2023).

## 2.1 History of Esports

In the late 1950's, at the Brookhaven National Laboratory in Upton, New York, students observed an analog computer game, *Tennis for Two*, the world's first ever "video game" (Migliore, 2021). According to Rogers, the game *Spacewar!* and its prize-winning competition could be credited for the birth of video games (2019), however, *Spacewar!* was not commercially available to most consumers. Thus, in the 1970's, an even more innovative era began. The introduction of *Pong*, released by Atari in 1972, followed *Tennis for Two* innovating the video game industry by creating an exclusive console game (Loguidice, 2009).

Major video game competitions began to form in the 1980's, beginning with an Atari sponsored event, as well as the publication of major scoring databases (Rogers, 2019). In the 1990s and early 2000s, gaming companies such as Sega, Nintendo, PlayStation, and Xbox competed against one another to make new games and advanced gaming consoles. The development of better games increased video game participation and led to the creation of more high-level tournaments, particularly in countries such as Japan (Migliore, 2021). Though there is not an "official" birth of esports, the *Quake*

competition at the 1997 Red Annihilation event is seen by some as the first esports event as it involved over 1000 online participants competing to secure a spot in the finals held in Atlanta, Georgia.

As tournaments expanded in size and importance some outlets began to broadcast video game tournaments on television and on the internet. In 2006, the first live televised esports event was broadcast on the USA Network, featuring *Halo 2* (SIUE, 2023).

Widespread enhanced high-speed home internet shortly followed, bringing competitive gaming to homes across the world. This allowed players to compete against one another more effectively, leading to a change in the esports landscape as distances between players became “smaller” and the opportunity to compete against other top players became “easier.” As the growth of esports continued, prize pools became larger, and some esports athletes and teams began to receive significant compensation for their game play.

Most tournaments distribute prize pools based upon player (if an individual played game) or team performance. The amount esports athletes get paid varies greatly depending upon the game played and the specific tournament organized. The highest prize pool currently offered is for *Dota 2*'s tournament The International (Consolazio, 2018). In 2021, the total prize pool of The International was \$41 million dollars (Prize Tracker, 2023). *Counter-Strike: Global Offensive (CS: GO)* and *League of Legends (LoL)* are additional games that often have high payouts for their tournaments. Regardless of the prize pool, nearly every esports tournament utilizes sponsorships to generate revenue and that source is often critical to a tournament, and subsequently player's, financial success.

## 2.2 Growth of Streaming

As internet speeds continued to improve in the late 2000's, more players competed on online gaming platforms (Migliore, 2021). Large game development companies began to capitalize on online gaming. Companies such as Activision (*Call of Duty*), Riot Games (*League of Legends*), and Epic Games (*Fortnite*), became powerful not only for game development, but also operating and/or licensing esports tournaments. Further, these specific gaming companies utilized their own servers to create an online gaming community, that often featured in-game tournaments, as well as other traditional video game play. As online game play expanded, streaming became popularized.

In 2007, *Justin.tv* launched which then later morphed to *Twitch.tv* in 2011 (Rao, 2011). This site quickly became a popular source of esports content. Concurrent viewership on *Twitch* has grown from 600,000 in 2016 to 2.4 million in 2022. Though *You Tube* has also been a strong platform for esports activities, *Twitch* has typically been.

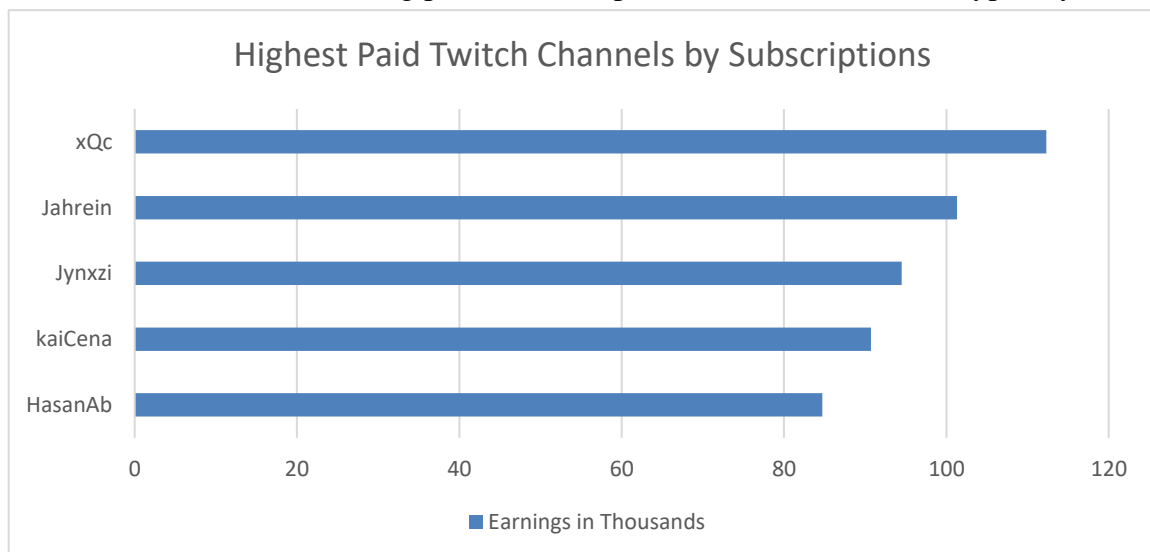


Figure 2.1 Highest Paid Twitch Channels by Subscription

recognized as the top location for esports content. Streaming has changed esports and made it distinctly different from traditional sports as esports players often utilize it as a

personal branding tool that can also generate direct monetary support.

Those who stream on *Twitch* can earn revenue from subscribers and donations. Players typically receive 50-70% per subscription purchased (Bonthuys, 2022). *Twitch* subscribers pay a nominal fee on a consistent basis to a *Twitch* account. The minimum subscription is \$4.99/month as a onetime or recurring fee; there are also subscriber tiers, where higher tiers offer more benefits, such as emotes utilized by the subscriber (Twitch, 2023). Often *Twitch* users' success ratios are measured by the number of subscribers they have, as seen in Figure 2.1 of the Highest Paid Twitch Channels by Subscriptions.

Figure 2.1 illustrates the top five paid *Twitch* channels as of February 3, 2023. The amount of earnings observed in the chart was calculated by the number of paid subscriptions per user (Stream Charts, 2023). As observed in the illustration, earnings are in the thousands. Another form of monetary gain for users on *Twitch* is through direct donations.

Direct donations come in the form of “bits” on *Twitch*. Each bit purchased gives .01 cent to the user. *Twitch* is transparent and educates users regarding how to monetize their content, engage with their community and embrace opportunity via sponsorship. Thus, an esports athlete who provides content that attracts many subscribers on the *Twitch* platform can earn a significant income from streaming.

Generally, the subscriber count of *Twitch* channels is not published, except for the top 200 players. The methodology of earnings varies across sources, as *Twitch* streamers can earn additional income from donations as well as sponsors (Twitch, 2023). However, the main earnings on *Twitch* specifically start with subscribers. It is important to note that in June 2023, the *Twitch* payout structure will change, moving to a 50/50 split of

subscriber revenue, affecting popular streamers on the platform who previously had a 70/30 revenue split with *Twitch* (Akbas, 2023).

### 2.3 The Esports Ecosystem

The esports ecosystem is centered on the game publishers with many additional factions including players, fans, team organizations, tournament organizers, arenas, leagues, broadcasters, social media platforms, and brands (Carrillo Vera and Terron, 2019). The publishers are the epicenter of the esports ecosystem, as they own the intellectual property of the games, how the games are implemented in competition and further development of the games. Although there are many important parts to the esports ecosystem, without game publishers, there would be no esports.

Each additional stakeholder within the esports ecosystem plays a role and benefits financially from the success of tournaments, individual teams, and game play. Some factions within the ecosystem can have multiple roles, such as athletes themselves owning teams, and having their own personal brand. Many esports athletes are affiliated with team organizations that partake in franchised leagues significantly supported from other organizations (such as *League of Legends* being owned by Riot Games). Others participate in non-franchised leagues. Whereas non-franchised leagues offer opportunities to increase the esports athlete's presence within the esports community, franchised leagues offer opportunities at a highly professional level, much like traditional sports. As esports athletes expand their presence within the community, more sponsorships may be offered.

With the rapid expansion of esports' popularity, in the mid 2010's, new, esports-specific venues were constructed. In 2015, Esports Arena opened in Santa Ana,

California, followed by a 30,000 square foot arena in Las Vegas, Nevada (News RX, 2018). The construction of said arenas contributed to the growth of multiple competitive gaming leagues within the United States including Electronic Sports League, Dota Pro and Overwatch League.

The esports ecosystem includes academia. In recent years, various esports curriculums have been introduced at several colleges and universities and competitive teams have been supported by athletic departments and/or other units (Student Affairs, Campus Recreation, etc.) of the institution. In 2023, it was estimated that 175 colleges had official varsity esports teams within the National Association of Collegiate Esports League (Diversified, 2023).

Each stakeholder within the esports ecosystem attempts to maximize their position and potential compensation. Like traditional sports, there can be large-scale monetary payouts to players and teams but beyond the top players, a small amount of money is typically earned. Unlike in traditional sports where there are usually separate leagues or competitions (e.g., US Open Tennis Championship), in esports most of the top events are open to teams and players regardless of gender. Though there is no physical requirement or demands that would preclude female competitors from achieving world class status, the history of esports has been notably male dominant with a lack of female esports athletes present at major tournaments. There have been some efforts to better develop and fund women's events, but that will take time to progress. There is no gender barrier to access for streaming platforms meaning girls and women esports players can pursue success through streaming activities without the need for direct or indirect support of coaches, teams, and tournament organizers.



Figure 1.2 provides an illustration of the current esports ecosystem, featuring examples of teams, publishers, tournament organizers, sponsoring brands, social media channels and consumers. This graphic is not all encompassing but offers a general sense of the esports ecosystem.

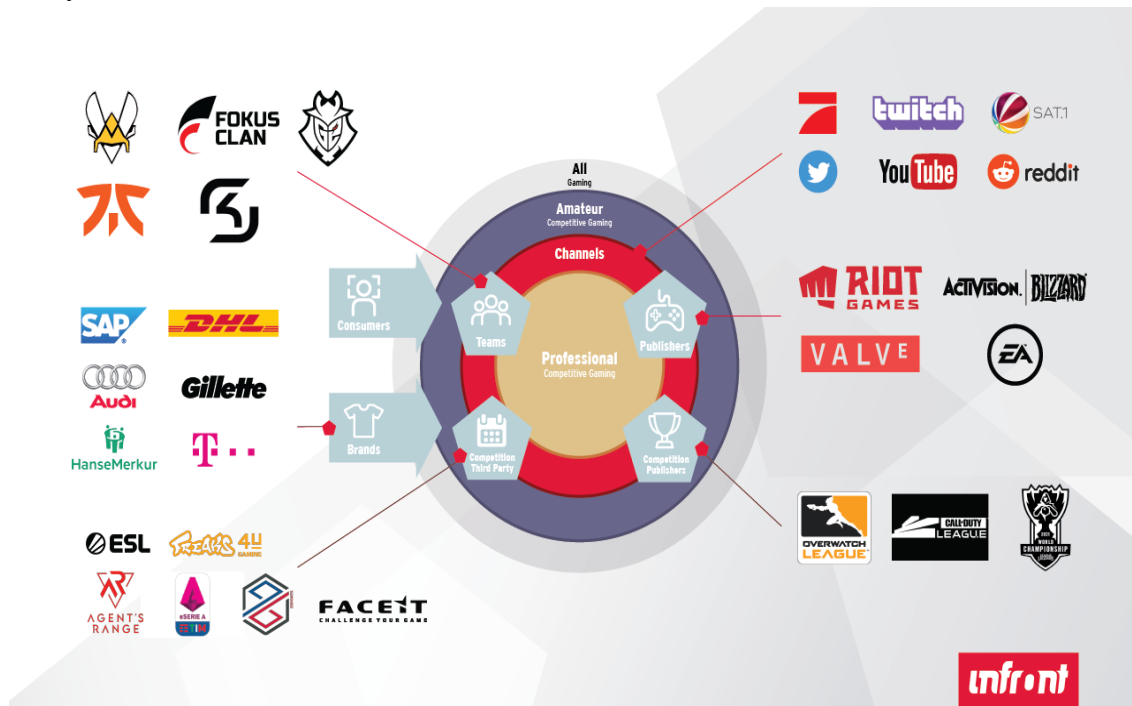


Figure 2.2 Esports Ecosystem Infront, (2022).

## 2.4 Earnings in Esports

In 2022, McLeod et al. conducted a study utilizing esports prize earnings from the top five games from the years 2005-2019. They analyzed the labor market and noted the similarity of esports and general sports regarding the similar earnings disparity amongst male and female athletes. Specifically, the study mentioned that prize money in sports like tennis are sometimes less for female athletes than male athletes. Researchers have also noted that there is social inequality in esports (i.e., harassment, sexualization), where female gamers were limited in gaming tournament participation (McLeod et al., 2022). This can be a contributing element to the earning inequality as fewer female

participants in the top tournaments likely will lead to much lower female tournament earnings.

Collecting data from *Esports Earnings* (esportearnings.com), McLeod et al. noted that the data analysis was limited to better understand the earning environment, information beyond prize pools must be analyzed. McLeod et al. assumed that popularity amongst video game streamers, as well as sponsorship, correlates with successful gameplay, therefore, the top earners should remain similar if the missing data was contributed, but that assumption has not been verified. Interestingly, McLeod et al. indicated that the esports labor market has grown by 36% since 2005, but with that growth there has also been a growth in the pay gap between males and females (McLeod et al., 2022).

McLeod et al., found that female players earning prize payouts have increased 35% since 2014, with overall accrual earnings increasing on average 170% (2022). The income distribution of esports is necessary to understand presently and in the future. Additionally, McLeod et al. noted that although gaming tournaments have large payouts, there is a growing inequality and unrealistic expectations (McLeod et al., 2022). They also noted there is financial opportunity for the esports athlete; however, the average player earns less than \$1,000 (McLeod et al., 2022). Thus, few esports athletes earn a significant payout, regardless of gender. However, as mentioned previously, this data is collected from the sole source of *Esports Earnings*, it does not include other income sources.

## 2.5 Understanding the Esports Fan

To create marketing solutions, Ukrainian scholars Krykavskyy and Kalynets analyzed how fans consume esports. Their study analyzed the attitudes of 110 esports fans. Krykavskyy and Kalynets measured the volume of viewership within esports and the ability of esports athletes to promote goods within their online communities while simultaneously influencing sponsors to donate and create opportunity for esports athletes. Kryskavskyy and Kalynets further mentioned that there is a significant lack of scientific study within esports due to the brief history of the activity as well as societal perception (2022).

Noting esports' importance to sport and entertainment Krykavskyy and Kalynets commented (2022):

Esports is a sports entertainment product with significant growth potential that requires management expertise related to events, merchandise, sponsorship, support, technology, human resources, social media, governance, legal, celebrity culture and welfare of athletes. As a result, the phenomenon of eSports has reached such a scale that it has even affected sports firms. (p. 22)

Thus, the Ukrainian scholars recognized that there is a lack of study within esports sponsorship. Kryskavskyy and Kalynets analyzed individual attitudes and intention to measure the effect of branding on subjects. The study found that there is significant variance between esports sponsorship and audience engagement with that sponsoring brand (2020). Further, Krykavskyy and Kalynets recommended that

sponsorship companies conduct target market research to determine if the investment in esports is positive and worthwhile. Concluding, the volume of esports is estimated at \$1-1.5 billion dollars with a 20% annual growth rate (Kryskavskyy & Kalynets, 2022). The study supported the idea that esports shows nearly unlimited potential in branding opportunity. However, Kryskavskyy and Kalynets failed to recognize marketing strategies for individual esports athletes, such as male versus female esports athletes, and further failed to mention any demographics disparity of their subjects, which would lead to a descriptive target market profile.

## 2.6 Male versus Female Esports Participation

Esports has typically been a male-dominated activity; however, as of 2019, female consumption and participation of esports was on the rise, with 22% of esports consumers identifying as female (Yu et al., 2022). Scholars have indicated the gender disparity of earnings within esports as there is no female professional gamer among the top three hundred earning esports athletes (Esportsearnings.com, 2022). However, Yu et al. noted that increased participation in major esports tournaments with large payouts will enable females to increase in stature at the highest competitive levels and eventually establish a stronger presence on money leaderboards. In the future, it is likely that not only will females be present on the esports earnings leaderboards, but they will also increase their esports consumption (2022).

Yu et al. utilized an online email questionnaire for esports fans of the Houston Outlaws. The questionnaire yielded feedback that indicated the majority of the surveyed women watched esports for social opportunities and the interests in the players, while

male fans usually enjoyed esports for the aggression and entertainment. All genders had an interest in esports athletes overall (Yu et al., 2022). The limitation of the study was that the sample was taken from a distinct group of individuals (the Houston Outlaw fan base). However, the study provided valuable insight for target markets and gender specifically. Vitelar focused on Generation Z, which includes individuals born in the mid-to-late 1990's – 2010 (Vitelar, 2019). This classification of esports fans has been connected to the digital world for the entirety of their lives. Thus, it is important to understand how Generation Z participates and consumes esports.

Throughout the literature review, there is a trend leaning towards increased participation and fandom for females in esports. Specifically, as noted by Yu et al., (2022), there is certainly a focus on Generation Z as the primary consumer of esports. When discussing earnings, McLeod et al. noticed an increase in female earnings but did not look beyond the data from *Esports Earnings*. Thus, noting the importance of social media in the esports ecosystem, an analysis of social media engagements would provide a greater understanding of how females are marketing themselves as esports athletes.

## 2.7 Connecting with Generation Z

For Generation Z, their personal branding online platforms form much of their social identity. Vitelar (2019) discussed the importance of Generation Z gaining a personal understanding of the benefits of social media and personal branding. Further, Generation Z should identify and maximize their potential to create a successful career by utilizing their digital platforms. Personal branding is necessary for survival, especially in the online world of esports. Although Vitelar does not specifically mention

esports in his article, he does discuss that furthering one's image and reputation are necessary for gaining influence, opportunity, and career advancement.

In his study, Vitelar (2019), conducted a quantitative analysis using (N=100) Romanian individuals of Generation Z aged 18-24 years old. Vitelar found that 98% of the studied individuals have an *Instagram* account, 85.7% have a *Facebook* account, and only 30% have a LinkedIn account. Vitelar indicated that Generation Z is conscious of their personal brand, and that generation will dominate the near future of esports participation and consumption. Vitelar's study can be utilized as a tool to analyze the target market of esports consumers as it profiles an age group that has had a significant impact on the growth of esports, as Generation Z is the largest consumer of esports (2022). However, the study was limited due to the sample size and geographic location, as the sample study only included Romanian subjects.

The literature in esports has proliferated. There is academic work on the esports ecosystem, fan engagement and how the industry functions and funds their athletes. However, there is a lack of information analyzing tournament entry and gender disparity in earnings other than from a psychological standpoint. This results in a need for further research regarding how esports athletes engage in other ventures aside from tournament play.

## CHAPTER 3

### METHODOLOGY

A quantitative analysis study was designed to determine the use of social media among the top earning esports athletes. Prior to collecting data, the following research questions were formulated to understand how the top earning female esports athletes utilize social media for their success in the esports industry.

RQ1: Does esports athletes' social media engagement relate to their earnings?

RQ2: Does the relationship between engagement and earnings differ based on gender?

Utilizing quantitative research methods, statistical data was first collected from the online database Esports Earnings. Earnings in the esports industry fluctuate as tournaments occur throughout the year. Thus, a single data snapshot of earnings was collected on November 7, 2022. The information contained in Esports Earnings is freely available to the public, where 100 games (e.g., *Dota 2*, *Rocket League*, *League of Legends*, *Hearthstone*, *Fortnite*, *FIFA*, etc.) with monetary prizes are verified. The esports athlete's unique identifying ID number is matched on the website, which is how their total earnings are tracked. Currently, Esports Earnings is the most accurate, public database in the esports community (Ward and Harmon, 2019).

Data was collected of the top earning male athletes (N=40), and the top earning female athletes (N=41), for a total sample size of 81 esports athletes. Additional demographic data for sex, age, country of origin, total prize pool earnings, other than gameplay percentage (meaning a percentage where their earnings come from), games played, and earnings was cataloged. It is important to note that 41 female esports athletes were chosen in the data set, because at the time of collection, two athletes shared one place in the ranking.

After collecting overall earnings for the 81 athletes on Esports Earnings.com, the athletes' social media followers on the following platforms: *Facebook*, *Twitter*, *You Tube*, *Instagram*, *Twitch* and *Tik Tok* were noted. Of the top 81 earning esports athletes, athletes were then ranked by number of followers on each respective social media platform. Of the total number of social media followers, an observation was made that females held nine of the top 20 spots in the ranking. It was further determined that the social media platform *Twitter* was the most utilized platform among the top earning esports athletes. *Twitter* was viewed as the most used platform by all 81 esports athletes, with 62% of the total athletes having profiles. *Twitch*, closely followed at 61%. *Twitter* was determined to be the primary social media platform to begin analysis of social media engagement and that social media engagement was measured by the number of followers in total.

The time portion for the data collected was between December 1<sup>st</sup>, 2020, to January 1<sup>st</sup>, 2023. This enabled a capture of over two years of social media engagement. Using this data confirmed that female esports athletes engage more on *Twitter* than male esports athletes. Once it was recognized that male and female athletes were active on



social media, an analysis to determine how gender, number of followers and earnings could relate was conducted.

To answer RQ1 and RQ2 a multiple regression model was developed. Multiple Regression is used to estimate the relationship between two or more independent variables, and one dependent variable (Bevans, 2023). Multiple regression is also used to determine the value of the depended variable at a certain value of the independent variable (e.g., Does gender relate to earnings?).

In research question 1 the study examined engagement and earnings. Engagement was considered the number of followers each esports athletes had in total. Research question 2 was answered by examining the interaction between engagement and gender on earnings. Coefficient and regression tests were conducted to determine the significance of gender and followers and their relation to earnings.

## CHAPTER 4

### DESCRIPTIVE STATISTICS

#### 4.1 Earnings Results

Male esports athletes hold the majority of the rankings of top earning esports athletes overall. The gender wage gap disparity is substantial, confirming what many in the industry have noted and previously reported (Esports Earnings, 2022). An overall average of male and female esports athletes' earnings were collected. The results showed the average earnings for males were \$3,649,139.78, while the average earnings for females were \$64,935.18. The total summary of earnings for the top 41 female esports athletes was \$2,662,342, and \$145,965,591 for male esports athletes. It was clear that from a prize pool perspective, there is an earnings disparity among males and females. Further, it was noted that of the top 40 males, only two games were played: *Dota 2* and *Fortnite*. Of the top 41 females, there were 14 different games played. In 2022, the prize pool for *Dota 2* was \$314,915,856 from 1,784 tournaments, making it the highest paying game in all esports which contributes to male esports earners being the top earners overall, as *Dota 2* has the largest prize pool (Meola, 2023). Additionally, within the top 40 male esports athletes and top 41 female esports athletes, male esports athletes account for 98% of esports earnings overall, but female esports athletes had a much higher average of social media followers compared to males.

#### 4.2 Social Media Followers Analysis

Followers were calculated from all viewed social media (*Twitch, Twitter, YouTube, Facebook, Tik Tok and Instagram*) platforms for each individual athlete. Of the top 20 social media followers, nine are female esports athletes, suggesting although female esports athletes may not be considered “top earners” from gameplay, their social media following is much larger than many of the top earning males. Thus, it was concluded that a further analysis of social media engagement of all 81 esports athletes was necessary.

Table 4.1 exhibits the *Twitter* engagement rate analysis of the top 20 esports athletes (male and female) with the most social media followers. Of the top 20 esports athletes with the most social media followers, female esports athletes contribute 45%.

Table 4.1 Twitter Analysis Results

Esports Athletes	Male	Female
Average Engagement Rate %	0.99%	4.4%
Number of Posts	5,322	26,465
Average “Likes”	163,697	121,992

According to *Popsters*, the average *Twitter* engagement rate is characterized by the following categories: 1. < 0.5% Poor, 2. 0.5-1% Average, 3. 1% + Excellent (2023). In terms of the importance of engagement, a higher percentage indicates a more successful profile’s personal branding and follower interaction. From the data, it is important to note most of the identified female esports athletes surpassed male athletes in engagement rate and number of overall posts. This supports the contention that of the top earning esports athletes, females surpass males in social media engagement and activity. Interestingly, male esports athletes surpass female esports athletes in average likes by 41,705. Likes on

*Twitter* are a metric of overall engagement, and certainly an important part of the engagement rate. However, even with a 41,705 differentiation of average likes, female esports athletes still have a 3.41% increase for engagement on social media versus male esports athletes, supporting the contention that female esports athletes often have more engaging content (Social Status, 2023).

#### 4.3 Regression Analysis

A regression analysis was conducted to determine the relationship between earnings, as the dependent variable, and two independent variables: gender and followers. The purpose of the regression analysis was to determine whether gender and/or followers have any impact on the earnings of esports athletes. Earnings were used as the dependent variable, gender and followers were used as the independent variables. A total of 81 observations of esports athletes were included in the regression analysis.

Regression results showed 80.9% of the variation (R-squared = .809) in esports athlete earnings were explained by gender, social media followers, and the interaction between gender and followers. The regression was significant. All three independent variables were significant. A change in a specific independent variable, (e.g., gender or followers) would more than likely change earnings. Regression yielded the following results:  $F(3, 77) =$  degrees of freedom; p-value for gender =  $<.001$ ; followers 0.010; and gender\*followers = .010, all showing significance. As viewed in Table 4.2, the relationship between followers and earnings is weaker for female esports athletes than that of male esports athletes. The p-values in Table 4.2 indicate that the independent variable gender is highly significant, and followers is significant and when combined also significant, there is a likelihood that followers and gender can be a predictor variable of

earnings. In terms of earnings specifically, per Table 4.2, controlling for followers, being a female esports athlete yielded around \$3.2 million dollars less in earnings compared to male esports athletes. As mentioned previously, followers were also significant and positive, indicating for each follower, athletes received around \$1 dollar more in earnings.

Table 4.2 Independent Variable Results B

	Coefficients	Std. Error	t Stat	P-Value	Beta
Constant	3302191.987	194029.842	17.019	<.001	
Gender	-3236006.399	242787.630	-13.329	<.001	-.803
Followers	1.008	0.382	2.642	0.010	1.528
Gender*Followers	-1.010	0.383	-2.675	0.010	-1.538

## CHAPTER 5

### GENERAL DISCUSSION AND FURTHER RESEARCH

This study analyzed esports earnings. Data indicated that male esports athletes did in fact earn more from competition than female athletes, as males have earned the top 499 places out of 500 in the esports earnings list. However, further research found that these earnings charted only prize pool data, meaning that the earnings came from tournament play. Considering the importance of social media in the esports community as it is the primary form that fans use to interact with esports athletes, a decision was made to determine of the top (N=40) male and top (N=41) female earning esports athletes, who had more social media followers. Many top female esports athletes have surpassed male esports athletes in number of social media followers. Further analysis investigated engagement of female and male esports athletes on Twitter. Top female esports athletes had an engagement rate of 4.4%, whereas top male esports athletes had an engagement rate of .99%.

To further understand the data, a regression analysis was conducted to see if gender and social media followers related to earnings. The regression results showed 80.9% of the variation in esports athlete's earnings was explained by gender and number of social media followers. All three independent variables were significant. Controlling for followers, being a female athlete yielded around \$3.2 million less earnings compared to male athletes. Followers were also significant and positive, indicating for each

follower athletes received around \$1 more in earnings. Finally, the interaction between gender and followers was significant and negative (as viewed in Table 4.2 and Table 4.3), suggesting the relationship between followers and earnings is weaker for female esports athletes than that of male esports athletes. For practitioners, this study supports the critical role that social media followers play in the impact of athlete's earnings. This study showed that female athletes may have more followers but from an earnings perspective, overall earn less. More analysis is needed to truly understand how much female athletes are earning, outside of structured tournaments to better understand the potential gender pay disparity in the esports industry.

The gender wage disparity is, on the surface, striking when it comes to the data published by *Esports Earnings*. The study determined that to truly analyze if there is a significant gender wage gap, as noted by researchers throughout the esports community, a complete comprehensive approach would be necessary, including all sources of possible earnings. Variables would include financial gain from streaming as well as sponsorship. Present variables contributing to the gender wage gap within the top earners of esports are team affiliation and the type of game played. As mentioned, *Dota 2* was the only game played among the top 40 male esports earners, whereas the top female earners played a variety of game titles. Perhaps, with large brand partnerships, the prize payout for the games played by female athletes will increase over time to increase game play earnings. Until that occurs, or more females play at the highest competitive level of *Dota 2*, a "wage gap" would be forecasted based off prize pool earnings.

The study found that top female player engagement on social media is much higher than top male player engagement for esports athletes, concluding that female esports athletes may be utilizing outlets other than tournaments for monetary gain. Utilizing social media as a community growth and monetary tool is beneficial to female athletes who want to expand their presence in the world of esports. Female esports athletes must utilize their social media networks to engage with fans and grow their personal brand as influencers in the esports industry. The growth of streaming and social media can potentially help to lessen the esports gender pay gap.

Further research can be conducted to address limitations in this study by analyzing female esports athletes' engagement on all social media platforms, including *Twitch*. It seems that there are two distinct groups of esports players, those who play professionally, and those who stream consistently. Female esports athletes seem to be more active on streaming platforms than on the official competitive websites. An analysis conducted on *Twitch* could be beneficial to see what the costs/benefits are of being on an official team versus independently competing and streaming consistently. Further, it would be beneficial to conduct a qualitative study to better understand female professional esports players' motivation and individual approach to social media usage.



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