Gender Pay Gap in Sports on a Fan-Request Celebrity Video Site

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ABSTRACT

The internet is often thought of as a democratizer, enabling equality in aspects such as pay, as well as a tool introducing novel communication and monetization opportunities. In this study we examine athletes on Cameo, a website that enables bi-directional fan-celebrity interactions, questioning whether the well-documented gender pay gaps in sports persist in this digital setting. Traditional studies into gender pay gaps in sports are mostly in a centralized setting where an organization decides the pay for the players, while Cameo facilitates grass-roots fan engagement where fans pay for video messages from their preferred athletes. The results showed that even on such a platform gender pay gaps persist, both in terms of cost-per-message, and in the number of requests, proxied by number of ratings. For instance, we find that female athletes have a median pay of 30$ per-video, while the same statistic is 40$ for men. The results also contribute to the study of parasocial relationships and personalized fan engagements over a distance. Something that has become more relevant during the ongoing COVID-19 pandemic, where in-person fan engagement has often been limited.

CCS CONCEPTS

• **Social and professional topics** → **Gender**.

KEYWORDS

Gender equality, Online fandom, Gender pay gap, Gender pay gap in sports

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1 INTRODUCTION

The Web has created new methods of communication among individuals, including new forms of fan engagement. Social media platforms have enabled parasocial interactions [57], ever since their inception. More recently, websites such as Cameo have provided, through financial incentives, fans with a medium that encourages celebrities to interact with, and respond to their fans. In addition to potentially changing the dynamics of parasocial relationships, these platforms introduced new ways of making money for anyone with a following, such as actors, influencers, and athletes. These new forms of revenue streams have the potential of generating income for people who might be disadvantaged under traditional systems of financial reward.

A wealth of research shows that women are often paid less than men in various sectors of society [31, 81]. However, there are cultural and regional differences (e.g., urban vs. rural jobs) in which the phenomenon varies [55]. While gender earning disparities have declined in the U.S. and in most European nations [32], they are still experienced across the world. Based on a 2021 report by Payscale, women earn 82 cents for every dollar men make [20]. The COVID-19 pandemic has actually set women back in terms of equal pay [1]. The World Economic Forum [25] reports a -0.6 percentage point set back in average distance to parity in pay compared to 2020. The report states that "On its current trajectory, it will now take 135.6 years to close the gender gap worldwide" (p. 5).

Concerning the causes of the observed gender pay gaps, Blau et. al. [33] used data from 22 countries, over the 1980s and 90s, and analyzed wage structure and its effects on gender pay gaps. Among other things, they found that female supply is negatively associated with gender pay gaps. Additionally, some studies have argued that differences in men's and women's behavior towards competition could explain the differences in pay, however [69] shows that in cases of performance pay (which can be used as an example of competition) the gender pay gap is smaller, thus concluding the differences in attitude toward competition would not be able to explain the differences in pay. Having children has also been shown to be a statistically significant factor in widening the gender pay gaps (only) in developing countries [78]. [31] performed a systematic review of 98 papers on gender pay gaps and provided a comprehensive list of all the factors that predict these gaps in pay (looking into factors such as which sector they work in, access to workplace authority, and access to hiring and promotion). Studies have also examined the factors that explain pay gaps across genders in specific nations/locations such as East Asia [37], South Africa [28], Lebanon [60], Western Australia [79] and Egypt [71].

Considering these documented gender gaps in pay, in this study we question whether the same disadvantages persist in the novel monetization systems introduced by crowdfunding platforms such as Cameo. Since gender equality is an explicitly stated goal in many domains including the United Nation's Sustainable Development Agenda, it is valuable to understand whether new online platforms such as Cameo help advance this goal. In this work, we focus on gender pay gaps in athletes as this group is well represented on Cameo.

2 RELATED WORK

In this section, we situate our work within the broader literature on online fandom, as well as gender pay gaps, with a focus on studies conducted on athletes.

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2.1 Online Fandom and Crowd sourcing

Sport fans often use social media, e.g. Twitter, to discuss their thoughts and opinions and experience a shared identity [56, 86]. Motivations for using sport-related Twitter are different between genders, with women being more likely to use sport-Twitter for entertainment, enjoyment, and pass-time than men [84].

Cameo is crowdfunding platform, launched in 2017, that could enable a new form of interaction between sport fans and athletes. Crowdfunding is the practice of "sourcing small contributions from a large number of individuals" [36]. It is also defined as "an online mechanism allowing individuals, groups, and organizations to solicit and procure financial gifts from a large number of donors" [77]. GoFundMe, Kickstarter, and Indiegogo are some of the most popular crowdfunding platforms today, with GoFundMe having raised a total of $9 billion as of 2019 [8]. There are numerous types of crowdfunding, including but not limited to "reward-based crowdfunding" [24]. In this type of crowdfunding, people pay money to unlock a specific reward associated with the project. As Cameo can be seen as a form of crowd-support and financing of athletes, we will provide a brief overview of studies on crowdfunding platforms in this section. We will then review studies on crowdfunding in sports.

While crowdfunding sounds like an exciting method of collecting funds, these campaigns are reported to have around 60% failure rates [41, 54]. As a result, many studies have focused on what leads to success or failure of campaigns. Differences regarding race and gender on these platforms have also been studied. [63] investigated the effects of gender stereotypes in the context of crowdfunding of technology ventures. They found that management experience is beneficial for male entrepreneurs but detrimental for female entrepreneurs. [67] showed that male entrepreneurs tend to be overconfident and set higher goal amounts which leads to higher frequency of failures. However, goal amounts and success rates of campaigns by male entrepreneurs converge toward that of female entrepreneurs in successive campaigns, as entrepreneurial experience mitigates the effects of their overconfidence. [58] found that men are more active on crowdfunding platforms, yet women have higher success rates. [68] concur with other studies in women being less active on crowdfunding platforms, showing that women make up only 15% of ventures seeking funding. However, they suggest that gender has no effect on the success of the campaigns. Analyzing crowdfunding projects in Latin America, [38] found that the inclusion of at least one woman in the board of firms seeking equity financing increases campaigns' success significantly. [72] examined the gender of investors rather than the investee. They suggest that the higher risk aversion of women affects their investment decisions as well, since they find that they are less likely to invest in higher-risk firms such as those that are younger. [58] report that women investors tend to invest in campaigns with lower success rates.

There are several websites for funding athletes and sports specifically. These websites include MakeAChamp[1] and SportFunder[2]. Even though these websites were founded in 2014 and 2012 respectively, there are only a hand-full of studies on them at the time of writing this paper. [66] explored sports crowdfunding in general, discussing the features and intended purpose of different crowdfunding models (e.g., legal constraints, criteria for choosing a platform). [65] concluded that crowdfunding can only be a project-based and short-term solution for funding sports, and long-term needs can only be met through sponsorship. Through interviews with crowdfunding executives, [27] report that campaigns are more likely to be successful if they include a sponsor company. [70] compared MakeAChamp with Planeta.ru, which is a Russian crowdfunding website for various project types including sports. They report that MakeAChamp, which is specialized for sports, has higher success rates and better performance. Through the analysis of 70 campaigns within NCAA Division I institutions, [77] identified different factors that influence the success of campaigns. Focus on a single objective and providing a greater number of updates (among other things) were identified as significant factors for the success of campaigns.

2.2 Gender Pay Gap in Sports

In 1970, when Billie Jean King won the Italian Open, she was awarded $600. This was when her male counterpart, Ilie Nastase, was awarded $35,000 [9]. That year, King expressed her displeasure with the unequal treatment. Three years later, in 1973, Billie Jean King threatened to boycott the U.S. Open unless they paid equal prizes to men and women. The threat worked, and both single's winners received a prize of $25,000 [11]. Later that year, King accepted a match with Bobby Riggs, which was highly publicized as the "Battle of the Sexes," proceeding to beat Riggs in a 6-4, 6-3 and 6-3 victory. This victory was seen as a victory for women's rights in general [4]. The fight however, was far from over. Even in tennis, not all major tournaments agreed to award equal prize money until 2007 [3]. In fact, outside of the Grand Slam events, the top 100 earners in the Women's Tennis Association (WTA) earn roughly 80 cents to every dollar the top 100 men in the Association of Tennis Professionals (ATP) earn [21]. This difference in pay could be seen when Serena Williams was awarded $495,000 for the Western and Southern Open while Roger Federer received $731,000 only hours earlier [19]. There have been numerous studies conducted on gender differences in tennis. For example, [47] studied pay gaps in tennis, reporting that median earnings over a player's career is significantly higher for men than women. Analyzing data from 2009, the difference in pay was explained by productivity, and differential payouts for middle- and low-tier tournaments. [82] similarly observed earning differences when controlling for prizes and days between tournaments among other things. Other aspects of gender differences in tennis have also been explored. For instance, [39] examined the differences in performance under pressure. The researchers found that men consistently choke under pressure whereas women display mixed results. While they might experience losses in performance, it is about 50% smaller than that of men. [83] examined differences in media coverage, showing that stereotypical beliefs are largely enforced and women are portrayed more negatively.

Yet, tennis is still considered the leader in gender equality among major sports. As of 2019, in the U.S., baseball/softball is the most unequally paid sport, with men earning an average of $4,031,549,

[1] https://makeachamp.com (Last accessed on March 15, 2022)
[2] https://sportfunder.com (Last accessed on March 15, 2022)

while woman earn an average of only $6,000[3] [14]. The salaries of NPF[4] softball players are said to be comparable with minor league baseball salaries (instead of the salaries of major league players) [16]. The discrimination in this sport has led to legal complaints and settlements [10]. Through interviews [35] examined perceptions of pay inequalities among female softball college athletes. The results showed that these athletes believed the lack of media coverage has an impact on their unequal pay.

Another sport with significant pay gaps as of 2019 is basketball. [14] reports the average pay of NBA players to be $8,321,937 and that of the WNBA players to be $75,181. This difference is partly due to the amount of generated revenues as NBA generates 7.4 billion dollars a year, compared to the 60 million WNBA brings in [42]. However, the two leagues do not award players equal proportions of their generated revenues [15].

In recent years many athletes have advocated for equal pay in various fields. One of these fights for equality that captured major media attention was that of the U.S. female soccer players. The U.S. woman soccer team is 1st in the world, wining its fourth world cup in 2019 [2]. Reports published that year, showed that these athletes would have earned six times more in bonuses if they had the same bonus structure as male soccer players [18]. This trend was shown to go higher than just the players, as female managers in similar roles were also shown to have lower pay [17]. This led all players of the female U.S. soccer team to sue their employers twice (for the details of these cases, as well as an in-depth study of the gender gap in sports see [50]). In 2022, after six years of campaigning, the U.S. Women's National Soccer team was able to reach an agreement guaranteeing equal pay for men and woman players [22, 23].

Studies of pay gaps are not limited to the fields mentioned above and pay gaps in other sports have also been studied [51]. Several studies have looked at gender pay gaps from a higher level instead of focusing on a single sport. More generally, [85] argues that the U.S.'s Equal Pay Act requires changes for it to actually be effective. The salaries of coaches of women's [73], high-school [52], and NCAA basketball [30, 34, 59, 61] teams have also been studied, with some suggesting the pay gap is not due to discrimination. [30] argues that since men's athletic programs generate greater and more consistent revenues than women's programs, economic models support the higher pay of men's coaches. [52] reports that, on average, female coaches make 26% less across all sports. Conferences, number of supervisory positions, and experience are reported to better explain the gap in pay between coaches compared to gender [73].

In the present research we examine the gender pay gap on a website—Cameo—in which fans can pay celebrities for specific messages. In effect, fans are crowdfunding specific individuals. We presently focus on athletes. A key differentiator of this study to previous ones, is that in websites such as Cameo there are no central authorities to dictate how much each individual is to make, which might alter the dynamics of the pay gaps.

2.3 Digital Studies of Gender Gaps

The rise of social media and the corresponding creation of "digital traces" have enabled new ways of studying and measuring gender gaps. Furthermore, the growing digitization of our lives has also created new forms of *digital* gender gaps, starting with differences in internet access. Social media advertisement statistics is one form of data that is increasingly used for the study of such digital gender gaps. These data, which can be collected at no cost, can be used to fill knowledge gaps for geographic or topical domains were ground truth data is unavailable or hard to acquire. Through providing estimates for the number of people matching different criteria, the data collected from platforms such as LinkedIn [62] and Facebook [45] can provide valuable information for gender gaps if additional steps are taken to access the accuracy of the estimations [53]. Previous studies have looked into gender gaps in STEM [29], access to mobile devices [76], preferences [40], and information access [48] using such sources of data.

Our work complements this line of work by tapping into Cameo with its payment related data. Such data can not be collected through the aforementioned advertising platforms.

3 PRESENT STUDY

The purpose of the present research is to examine whether a gender pay gap exists for athletes on the crowdfunding website Cameo[5]. While previous work has examined gender differences in sport fandom more broadly (e.g., [64, 80]), we are unaware of comparative studies that examine the athlete-fan engagement and monetary support from a gender angle. In particular, no work has examined gender differences on direct fan-based financing of athletes through means such as direct purchasing of content (videos), which is what Cameo offers. While such video engagements could be seen as an extension of parasocial relationships (e.g., [74]), they are particularly timely during the COVID-19 pandemic as they offer a socially distanced yet personal format of athlete-fan engagement, beyond the normal social media posts and comments. Based on the prior research described above, we hypothesized that male athletes would earn significantly more money than female athletes on Cameo.

4 METHOD

4.1 Cameo

Cameo is a web-service that allows individuals to purchase personalized video messages from celebrities (referred to as "Talents" in Cameo). There are thousands of talents on the website, including actors, musicians, athletes, and influencers. Cameo's video prices ranges vary from $1 to as high as $15,000 [6][6]. In 2019, Cameo reported profits in the eight figures [5].

Talents can create profiles on the platform where they indicate how much they would charge for video requests, and replying to direct messages. They further indicate how long they would take to deliver a request. It is important to note that each talent has the ability to set their own price and the price is not set by Cameo [12]. Some celebrities join the platform in order to help charities, in which case a "charity" sign is added to the talent's profile. Fans (users) can then join the talent's fan club (which informs them of cheaper deals and such—much like a newsletter), request videos,

[3]This is a full-season salary and not a monthly payment.
[4]National Pro Fastpitch

[5]https://www.cameo.com/ (Last accessed on May 30, 2022)
[6]Cameo also has limited time featured artists (such as Jon Bon Jovi who was available for a limited time and charged $10,000 for charity). Given the unavailability of some accounts at different points in time, the maximum price is subject to change in time.

and review the videos they have received. Sample videos of the talent are also shown on their profile. The sample videos are the six most recent requests which are made public (unless specifically indicated by the user to be private). Cameo allows users to purchase videos for themselves, someone else, or for businesses (however, not every talent on the platform accepts business-cameos). When buying a video, the fans are prompted to provide information on who the purchase is for. Additionally, fans are asked to provide instructions for the talent (which should satisfy the character length condition; 20 $\leq$length $\leq$ 250). Fans are also asked to (optionally) provide the occasion of the cameo (e.g., birthday, pep talk).

4.2 Data Collection

In the present study we collected data for Cameo talents. To do so we use the "categories" (e.g., actor, athlete) on the platform and retrieved the information of all active/available accounts at the time of data collection. At collection time there were a total of 12 high level categories on the platform and 210 subcategories. The high-level categories are not mutually exclusive and overlap in members exists. As Cameo offers limited time featured Cameos, we performed the data collection on two different dates (May 22, 2021 and June 27, 2021) and combined the data to ensure that our collection is not significantly affected by the limited time offers. In total we collected the information of 19,527 talents. The information collected for each of the talents includes their categories, personal information (e.g., name), and prices. Having collected this data, we used a name to demographic information software [13] to detect a talent's most likely binary gender based on their names. The results classified 7,306 of the accounts as women, and 12,711 as men. The genders of a total of 1,627 talents were undetermined. To evaluate the accuracy of this tool we randomly sampled 100 accounts that had been labeled as female and 100 accounts that had been labeled as male by the software. We then hand labeled these accounts ourselves. The results indicated an accuracy of 88% for female labels (88 of the 100 names machine-labeled as "female" are also labeled as female by the annotator) and 94% for male labels.

Cameo categorizes the talents on the platform into various groups. For this study, we focused on the accounts that are categorized under "athlete." 4,155 users matched this criterion. Among these athletes, 717 were labeled as female and 3,238 as male. Due to the lower accuracy of the gender-detection software on female accounts, we hand-label all the accounts that were labeled as female, as well as all the accounts labeled as unknown (re-labeling a total of 1,138 accounts). The final distribution of binary genders is 593 female and 3,560 males.

5 RESULTS

As previously stated, in this study we aim to investigate the gender differences in pay and request count among athletes on Cameo. As request counts are not reported on Cameo, we consider the number of ratings a talent has to be a proxy for the number of requests they receive. To account for sport-field specific differences we look into different subcategories of athletes. However, we only consider subcategories with at least 20 athletes of each gender to reduce observation of results that are only due to small sample sizes. In addition to subcategories, we also look into aggregate results for all athletes.

We begin by comparing mean and median values. For mean comparison, since t-tests make normality assumptions about the distributions of the data which can not necessarily be made in our case, we instead performed bootstrap hypothesis tests [43]. For each test we calculate the proportion for 1000 samplings. To compare median values we perform the Mood's median test since it is already non-parametric. These results are shown in Table 1. The * in each cell indicates that the metric is significant ($p-value < 0.05$). However, since we are testing multiple hypotheses (n = 14), we also use the Bonferroni correction to reject the null hypothesis if $p - value < 0.05/n = 0.035$. For simplicity, the numbers have been rounded to the closest dollar/count value. We can see that for almost all categories, male athletes are paid more on average and have higher numbers of ratings. Not all of these differences in pay are found to be significant, however, this could be due to sample size as there are much fewer females in most athletic fields on the platform. We also see that the differences are found to be significant for all athletes. While aggregate results such as this might be due to Simpson's paradox, we don't believe that is the case because Simpson's paradox occurs when the trend observed when the data is aggregated (e.g., higher average pay for men in our results) does not hold in the smaller sub-groups. However, we can see that men's average pay (as well as other statistics) is higher for the majority of the sub-fields.

As shown in Table 1 the total number of athletes is less than the sum of athletes in each category. This is because, as previously mentioned, groups do include shared members and each account can be a member of multiple groups. Specifically, among the athletes 48% have more than one category and 26% belong to more than two.

To have a different view on the gender pay and rating inequalities, we paired each male athlete with each female athlete within their field. We then counted the cases where (i) the male athlete had a higher price, (ii) the two athletes had the same price, and (iii) the female athlete had a higher price, we repeat this random pairing 1000 times and report the proportion. Across all categories we observed a distribution of (i) 54%, (ii) 6%, and (iii) 39%. Similarly, when looking at the ratings, we observed that (i) the male athlete was rated higher in 51% of cases, (ii) the ratings were equal in 6%, and (iii) the female athlete was rated higher in 42%.

We also examine (average/median) ratios for athletes of the same gender in Table 2. A large (average/median) ratio indicates the presence of individual "superstars" who skew the distribution. We can see that the ratio is larger for men than for women. This could indicate there are pay inequities within a gender, with these differences being larger for men. The only field showing higher (average/median) ratio for women is basketball.

6 DISCUSSION

The purpose of the present study was to examine gender differentials in pay for athletes on a novel website. We hypothesized that male athletes would earn more than female athletes. The results largely supported our hypothesis. The only category where women had higher average pay for was "extreme sports."

Table 1: Comparison of prices and #ratings for talents in various fields based on gender. * indicate significant results in bootstrapping tests where ($p - value < 0.05$) and ** for cases when ($p - value < 0.05/14 = 0.035$). Only fields with at least 20 members for each gender are included. "All Sports" includes talents from all fields, including smaller fields. Talents can be listed in several fields.

	Female Athletes					Male Athletes				
Field	#	Avg. Price($)	Median Price($)	Avg. #Ratings	Median #Ratings	#	Avg. Price($)	Median Price($)	Avg. #Ratings	Median #Ratings
Commentators	51	55*	35	27*	12**	208	79*	50	45*	17**
Coaches	20	78	55	16**	5*	129	114	75	38**	11*
Extreme sports	39	59	49	19*	10**	193	53	25	34*	2**
NCAA	62	53**	40	17	6	532	89**	50	30	9
Golf	28	53*	37	20	5	46	83*	50	25	5
Olympics	113	57	35	19	5	137	61	35	19	4
Soccer	58	38**	27	15	4	207	63**	35	19	5
Basketball	69	57	30	11**	5	483	83	49	22**	5
Tennis	25	46	30*	11	3	26	74	47*	17	9
Fighters	28	48**	35	12**	7	107	93**	50	35**	3
Pro-wrestlers	51	53	40	25**	11*	198	65	40	87**	21*
UFC	34	57**	42	9**	5	87	97**	50	37**	5
Winter Sports	26	27	20	14	1	63	30	20	6	1
All Sports	593	50**	30**	18**	5	3560	74**	40**	29**	6

Table 2: Avg./Median ratios for athletes in different fields based on gender

	Avg./Median Prices ($)	
Field	Females	Males
Commentators	1.5	1.5
Coaches	1.4	1.5
Extreme sports	1.2	2.1
NCAA	1.3	1.7
Golf	1.4	1.6
Olympics	1.6	1.7
Soccer	1.3	1.8
Basketball	1.9	1.6
Tennis	1.5	1.5
Fighters	1.3	1.8
Pro-wrestlers	1.3	1.6
UFC	1.3	1.9
Winter Sports	1.3	1.4
All Sports	1.6	1.8

Conceptually, a de-centralized and crowd-sourced mechanism of direct fan-to-athlete payment could break existing historic patterns of gender pay inequity. However, our work shows that the Web and new forms of online interaction are by themselves not sufficient to guarantee gender equality.

6.1 Pay Gap

Research shows that women are often paid less than men in various sectors of society (e.g., [31, 81]), including sports (e.g., [14]). Existing gender pay gaps in sports occur mostly in a centralized setting, where either a sports federation or another powerful organization decides to pay female athletes less than their male counterparts. Our work shows that gender pay gaps in sports also persist in the case of a grass-roots fan engagement website, where athletes set their own price and fans can request video services from whomever they choose. This suggests that a more "democratized" approach to pricing of sports might by itself not lead to gender pay equity among athletes.

When comparing median pay and rating counts (shown in Table 1), while, overall, female athletes seem to be underpaid and less requested, female athletes are doing better compared to men in domains where the viewership prefers female athletes, such as in Olympics. Pro-wrestling is one of the other few fields with equal median prices for men and women. This could partially be attributed to the different audience distribution of these sports. For instance, 35% of the audience of WWE are females [26] while the share of female audience for global sports is 47% [7]. Another reason could be that these sports tend to sexualize woman more than other sports. Similar observations for UFC fighters were made in [46], noting that fans of female UFC fighters look at them to satisfy sexual desires rather than athletics. [75] also argues that the different regulations set by the UFC can cause different perceptions of these fighters compared to male athletes. For instance, the permitted weight groups in UFC play into the heterosexual male desires where female fighters are not too muscular. Uniform and less space/time to fight also play into these perceptions.

6.2 Parasocial

In the present study, we make use of data gathered from the website to study pay and request frequency differences. However, interactions with fans are at the heart of this platform. As such one could look at this platform from the perspective of parasocial relationships. While these relationships have previously been extensively studied both in the digital/social media spaces [49] and the television space [44], as the website introduces a new method of interaction between celebrities and fans, future work could focus on these interactions and how they might change/impact parasocial relationships.

6.3 Limitations

Crucially, our study design could not reveal whether the prices set by the athletes are the result of an efficient market mechanism at work or if, instead, female athletes are simply underpricing themselves. At the same time, assuming that the number of reviews is a proxy for the number of requests, there is evidence that female athletes are less often requested to create a video message. Whether these differences are the actual causes of the higher pay requires causal analysis. It is also worth noting that we do not know if this is a demand or supply issue. In other words, since each athlete selects their own rates and rates are not forced upon them, we cannot say if the lower prices for female athletes are because they set low prices and would have still sold Cameos if the prices were higher, or if they have already tested, and found that the requested price, is the highest people would pay.

In the present study we only examined a single platform—Cameo. While the platform continues to grow, it does certainly not represent all athletes. In particular, it is heavily skewed to U.S.-based athletes and contains relatively few top-tier athletes, who might not be incentivized by up to few hundred dollars per recorded video message. However, we were expecting this selection bias to favor women, which turned out to be not the case.

Finally, our study only looked at differences between female and male athletes, following the existing binary classification used in most professional sports. As sports institutions and events are gradually evolving and becoming more accessible to transgender and non-binary athletes,[7] it will be interesting to see how these marginalized and excluded groups will benefit from non-traditional financing mechanisms.

7 CONCLUSION

In this research, we examined whether traditional gender pay gaps in athletics would persist in an online, crowd-sourced setting. Using data from the Cameo website, we found that, unfortunately, men generally were paid more than women across various indicators. The results highlight that the gender pay gap exists not just for paying athletes to play by a centralized authority, but also for what fans will pay online for specialized videos. Given the growing importance of online platforms for facilitating athlete-fan interactions, more research is needed on how to break existing patterns of gender disparities in these digital environments. Our efforts on measuring gender pay gaps are a first necessary step in this direction.

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