



Gender Pay Gap in Basketball: A Comparison of WNBA and NBA Players

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1. Abstract

The gender pay gap is a persistent and unjust disparity in earnings between men and women performing similar roles. This research paper examines the gender pay gap in basketball, focusing on the United States National Basketball Association (NBA) and Women's National Basketball Association (WNBA); aiming to determine the impact of gender on athlete earnings. The literature review presented in this paper, delves into theories like the human capital model and labour market discrimination, highlighting the broader presence of wage disparity across numerous industries. The review also identifies sponsorship, media coverage, and audience demand as factors that contribute to the sports industry's gender pay gap. To conduct the primary research, statistical analysis of salary data spanning the years 2020 to 2023 of select teams from both the NBA and WNBA was conducted. As hypothesized, they revealed significant differences in average salaries between male and female players. Notably, positive trends in narrowing the gap in the earnings of WNBA players were also observed, especially after a new collective bargaining agreement in 2020. The study underscores the persistent gender pay disparity in basketball and emphasizes the need for initiatives to promote gender equality in sports and society at large.

Keywords: *Gender pay gap, Basketball players, Pay discrimination, Wage gap*

2. Introduction

The gender pay gap is the difference in average gross hourly earnings between women and men. It is the product of structural gender discrimination stemming from the horizontal and vertical segmentation of labour forces. Structural gender discrimination results in certain jobs being predominantly held by women, leading to undervaluation of "female-dominated jobs", and facilitates the infiltration of gender bias into salary determination for both women and men. Additionally, while gender equality is reason enough, solving or even narrowing the gender pay gap can have significant impacts on the world economy as well. The International Labour Organization (2019) estimates that reducing the disparity in participation rates between men and women by 25 percent by 2025 could potentially elevate global GDP by 3.9 percent, equivalent to an estimated US\$5.8 trillion. Unfortunately, adopting laws, and implementing better policies are moving at a snail's pace.

This gender pay gap extends even into the sports industry. In fact, in a study that analysed over 460 occupations, it was found that athletes had the worst gender pay gap (Wilson & Showalter, 2016). As the years have passed, many studies and organisations have claimed that the gender pay gap in this industry has reduced. For instance, according to research conducted by BBC, a total of 83% of sports now reward men and women equally. Some may view this as an improvement from the first study, which was conducted in 2014 and showed that 30% of sports rewarded men better than women (Thompson & Kopczyk, 2017). However, the credibility of this statistic is fully dependent on BBC's use of the term "equally." In reality, the reward for male and female athletes being reported as 'equal' is instead equitable - wherein the athletes of the different genders are receiving rewards based on what is deemed 'fair'. The problem with this view is that it is greatly influenced by gender stereotypes and once again limits the reward that female athletes rightly deserve.

Whilst all sports suffer from this gender pay gap, the gap tends to be even worse when analysing sports which is typically perceived to be male-dominated. Basketball is a prime example of one such sport. In 2019, the average NBA player earned \$8,321,937, while a WNBA player earned \$75,181. Moreover, the average max salary cap for a player in the WNBA is roughly about \$117,500 (Berri, 2018), while for an NBA player it's about 300 times more than that. For instance, Steph Curry's earnings is approximately \$40.2 million. The issue of the gender pay gap in basketball has long persisted and continues to do so. However, in recent years, there has been increased conversation around the matter and certain regulations imposed with the aim of bettering the situation. In light of the aforementioned, this research paper aims to statistically analyse the data from the 2020, 2021, 2022 and 2023 seasons of the NBA and WNBA league to answer the question "To what extent does the gender of the athlete have an influence on the average pay received in basketball?"

3. Literature Review

Understanding the reasons behind pay disparities and actively seeking solutions to address the gender pay gap is crucial. Numerous theories have been employed to explain the source of wage discrimination and the existence of the gender wage gap. According to a study by Virginija Grybaite (2006) which analysed theoretical approaches to the gender pay gap, such explanations can be categorised into two sets. The first theory is the *human capital model*. Human capital refers to the abilities and skills people have developed through education and training. According to this theory, gender differences in qualifications and skills (human capital) contribute to the gender wage gap. Analysis of the literature proves that it is the intermittent work history for female workers that stands as the root cause for these differences. For example, Gary S. Becker (1985), Nobel prize recipient, notes that women have historically been more inclined than men to engage in part-time and intermittent work, often due to taking time off after having children. Similarly, Jacob Mincer and Solomon Polache (1974) argue that women's occupational choices are influenced by their desire to minimise the losses resulting from this intermittent attachment to the labour force. Therefore, not only do women have fewer incentives to invest in education and training, which are essential for enhancing earnings and job skills, but they also consequently have less experience in the labour market compared to men. Thus, as per the theory, this results in females possessing less "human capital" and hence lower earnings. However, the theory has received its fair share of criticism. Some argue that it relies on broad assumptions and fails to consider the normative context in which decisions are made, where societal expectations shape gender roles. They emphasise that women and men cannot be studied as independent individuals, and the disparities they face in their working lives must be understood within broader social contexts. Furthermore, human capital differences alone may not fully explain the wage gap, as factors like education and work experience only account for a portion of it. This can be observed in countries like Lithuania (Department of Statistics Lithuania, 2005), where women, on average, have higher education levels than men but still tend to work in lower-paying sectors. Additionally, work experience is not a determining factor since Lithuanian women have comparable levels of experience and job tenure as men. Similar patterns are observed across various European countries.

The second theory talks about *labour market discrimination*. It refers to the pay gap that remains after accounting for gender differences in qualifications. Becker (1971) proposed the concept of a "taste for discrimination." He argued that some individuals have a preference for discriminating against certain groups, which goes beyond mere likes or dislikes. His model suggests that discrimination can stem from various sources, including employers who prefer certain employees over others (employer discrimination), employees who discriminate against their coworkers (employee discrimination), and customers who discriminate against suppliers they interact with (customer discrimination). For instance, an employer might be willing to hire women as secretaries but reluctant to hire them for construction work. Men might be willing to work with women in subordinate positions but resist having women in superior positions. This can also be considered as 'gendering of occupational roles' (Doering & Thebaud, 2017). Similarly, customers who enjoy purchasing flowers from women may avoid buying cars from female salespeople.

Interestingly, there are other pieces of literature that suggest or confirm the idea of labour market discrimination being a cause of the gender pay gap (See also Phelps (1972) and Bergmann (1974)). Furthermore, Farrell (2005) argues otherwise by presenting a controversial perspective on the issue of the gender pay gap. Drawing from his research, Farrell argues that women face economic consequences when they prioritise careers that offer greater flexibility, lower risk, and increased fulfilment. Such occupations tend to have lower salaries compared to other professions. For instance, a librarian with a graduate degree may earn less than an uneducated garbage collector, who receives higher wages due to the greater risks and less desirable working conditions associated with the job. Farrell challenges the notion that unequal pay for women is primarily driven by bias and discrimination. Instead, he asserts that women often earn less than men because of personal choices that impact their earning potential. Farrell rejects the presumption that women face workplace discrimination and argues against the idea that their lower wages are primarily a result of discrimination.

3.1 Manifestation in Different Sectors

Apart from Sports, Arts and Entertainment, Finance, Tech, and Healthcare are some sectors where the pay gap is extremely severe. For example, in finance, despite equal career entry rates, top-level executive positions are mostly held by men, limiting promotion opportunities for women (Chin et al., 2018). Similarly, in healthcare, female workers face additional burdens and earn less than their male counterparts (ALobaid et al., 2020). The Tech industry also exhibits a substantial pay gap, particularly affecting women and BIPOC individuals. According to statistics published in a 2021 article, women tech workers in America make an average of 83 cents for every dollar earned by their male counterparts (Olin, 2021). While the gender pay gap in the tech industry remains a persistent issue, there are some statistics that indicate gradual improvement in recent years. According to the Gender Pay Gap Report by The University of Oxford (2023), the gender pay gap in the tech industry has decreased over the past few years. The report found that the pay gap narrowed by 2% between 2019 and 2020, with women earning 96 cents for every dollar earned by men in tech roles. Unfortunately, discrimination, harassment, and unequal pay still continue to persist in the tech sector, despite this improvement.

3.2 Sponsorship, Media Coverage, Audience Demand

According to an article published by BBC, in the sports industry; "sponsorship and endorsements, as well as contractual conditions, have become some of the main forces perpetuating the imbalance." This is due to the implication that male athletes are seen as more marketable, resulting in fewer endorsement chances for female athletes. Female athletes are seldom chosen as brand ambassadors, and women's sports just receive a small portion of total sports sponsorships. The imbalance in endorsement deals also contributes to the income disparity between male and female athletes. For instance; Ronaldo, one of the most popular male athletes in the world, makes about \$90 million from endorsements, whereas Serena Williams, one of the most popular female athletes in the world, only made 35 million dollars in endorsements (Perraso. V, 2017).

Recently, the "Big Deal?" report was released by Women in Sport (2011) in the UK - the report examines the extent to which women's sports are included in sponsorship deals and their potential as an investment opportunity. The findings of the report indicate that the majority of sponsorship investments are directed towards men's sports, leaving a significant untapped potential in women's sports. Additionally, according to a study by the University of Minnesota's Tucker Centre for Research on Girls and Women in Sport in 2013, only up to 4% of sports media coverage went to female sports, despite the fact that 40% of all participants were female. This disparity results in unequal chances for sponsorships and personal marketing, to the point

where the majority of female athletes worldwide are unable to make a living from their sports careers.

Television exposure and broadcasting agreements play a vital role in attracting sponsors, endorsements, and increasing wages for female athletes. However, when it comes to media coverage, it either emphasises entertainment or sexualized content rather than the athletic abilities of female athletes, or, is predominantly male-dominated, with few women in televised sports media positions. A study in 2020 analysed “how much” and “what” coverage of female athletes there is on Twitter where it was concluded that female athletes suffer more discrimination in sports media (“how much”), whereas in terms of the “what”, female non-athletes suffer the most sexist stereotypes in tweets (Lameiras & Rodríguez-Castro, 2020). Another study compared coverage of women's sports on ESPN's SportsCenter and Fox Sports 1's Fox Sports Live, in which both TV programs were found to cover women's sports less than 1% of the time (Cooky et al., 2015). A good example of the aforementioned is seen in the case of Amy Acuff- the most photographed female athlete in U.S. media build-up towards the Sydney Games (Lamoureux, 2012). She didn't say anything about wanting to win a gold medal during her pre-Olympic media coverage. Instead, she said she wanted to work on the Sports Illustrated swimsuit edition: “Because people get a lot of attention for that.” One theory for this disparity is that media executives contend that audiences don't accept women as sports analysts. It's believed that media coverage of male sports is typically of higher quality and perceived as more thrilling, due to which male athletes attract larger audiences, which influences the commercial value of a sport and the media coverage it receives (Greer & Jones, 2023).

3.3 Current Scenario in the Sports Industry

The value of women's sports is often underestimated based on conventional measures like TV viewership and attendance. However, research indicates that women's sport has a broader reach, influence, and value. Despite currently accounting for only 10% of live sports broadcasts and having a smaller audience compared to men's sports, women's sports have been experiencing growth and is predicted to grow beyond a billion dollars in the next few years (Lee et al., 2020). Successful examples of women's sports leagues in Australia include the Rebel Women's Big Bash (WBBL), Women's Australian Rules Football League (AFLW), and Suncorp Super Netball. Sponsors supporting women's sports are beginning to gain appeal with the audience, and there is a positive shift in brand partnerships towards women's sports. The focus on diversity and equality in society further drives investment in women's sports, which is also seen as an exciting trend in the sports industry.

Yet, the majority of sports still remain male-dominated, with only a few sports like golf and tennis taking strict action to reduce the gender wage gap. For example; Tennis is the only sport where women feature in Forbes's prestigious list of the “World's 100 Highest-Paid Athletes.” Furthermore, according to an article published by Forbes, only tennis celebrates female players more than any other sport. It commended how Maria Sharapova earned \$23m in endorsements and \$6.7m in prize money in 2015, and even though her endorsements were reduced, she along with Serena Williams are “two ladies that have become wealthy through their business guile and sheer talent, thanks to the equitable realm of tennis.” (Brennan, 2016).

In Basketball, there has always been immense controversy surrounding the NBA and WNBA because the sport in itself is recognised as a male-dominated and has tendencies for unequal pay. For instance, in 2018, WNBA players received less than 25% of the league's revenue, while NBA players received around 50% (Berri, 2018). Additionally, unlike male players, WNBA players don't receive revenue from jersey sales. In 2020, a new collective bargaining agreement was implemented for the WNBA, valid until 2027. It sets the average salary at \$130,000, with a salary range of \$68,000 to \$215,000 (WNBPA 2019). Exceptional players can earn over \$500,000 annually. It also features significant investments by the league and its teams aimed directly at increasing player salary and compensation, improvements to the overall player experience, resources specifically designed with the professional female athlete in mind, as well as a commitment to implement an integrated marketing plan league-wide.

4. Hypothesis

The literature review has quite clearly proven that a gender wage pay gap exists, therefore it gives us the opportunity to analyse it more closely in terms of basketball.

In light of the above, this study tests two hypotheses:

1. Gender of the athlete has an influence on the average pay in basketball
2. The average pay of female basketball players in the WNBA has increased over the years

5. Methodology

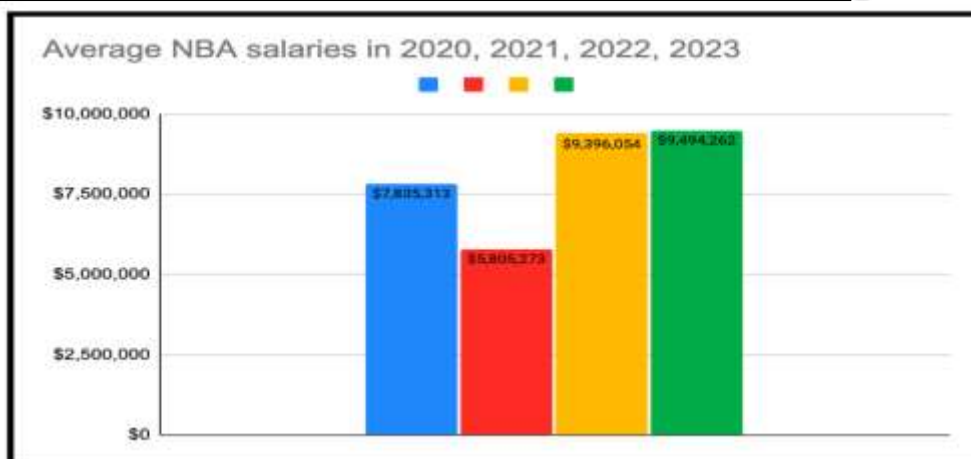
The data regarding the average salaries of players belonging to the NBA and WNBA teams was taken based on the 2020, 2021, 2022, and 2023 seasons. The teams chosen were representative of the states of Atlanta, Chicago, Dallas, New York, Washington, Indiana, Los Angeles, Minnesota and Phoenix as these were the only states for which there were both an active NBA and WNBA team. Additionally, the specific seasons were chosen because the 2020 season marked the implementation of the collective bargaining agreement for the WNBA, which was anticipated to have a significant impact on the salaries of WNBA athletes. The decision to use data published on Spotrac was not only influenced by its credibility but also by its easy accessibility in providing information on the average pay for each NBA and WNBA team for the specified seasons. However, there is always the possibility of bias.

6. Results

Table 1
NBA and WNBA Average Salaries State-wise

Salary averages (2020-2023)	NBA	WNBA
Average ATL	\$8,425,211	\$99,335
Average CHI	\$8,820,156	\$109,728
Average DAL	\$8,312,693	\$92,840
Average NY	\$6,490,462	\$96,928
Average WAS	\$7,717,478	\$112,791
Average IND	\$6,540,567	\$84,379
Average LA	\$8,904,666	\$100,083
Average MIN	\$9,094,284	\$100,566
Average PHX	\$8,889,012	\$107,441

Considering the sample size is small, a Shapiro-Wilk test was conducted to assess the normality of the data. Results indicate that for NBA salaries $W=0.823$, $p = 0.037$. While for WNBA salaries, $W = 0.965$, $p = 0.846$. This indicates that NBA salaries does not follow a normal distribution while WNBA salaries are normally distributed. Thus, a non-parametric test was selected for further analysis. To test the first hypothesis a Kruskal Wallis test was conducted where the results indicated $X^2=8$ and $p= 0.043$. Since $p < 0.05$, it indicates that there is a significant difference between NBA and WNBA player’s salaries across the 9 states. Post-hoc analysis indicates that WNBA players had a significantly lesser salary than NBA players. To test the second hypothesis, histogram was utilized. Below are two histograms comparing the average WNBA and NBA salaries between the 2020 to 2023 seasons.



The WNBA chart depicts a significant rise between the 2020 season and 2021 season, from an average of \$88,179 to an average of \$100,219. This may be due to the collective bargaining agreement implemented for the WNBA in 2020, which set the average salary at \$130,000, with a salary range of \$68,000 to \$215,000 for each WNBA player. This was beneficial because the minimum salary in 2020 was much lower at \$57,000 even though the maximum salary was similar. That being said, despite this agreement, there was a fall in the next season, 2022. Lastly, the 2023 season has by far the highest average salary. This may be because every year, both the minimum and maximum salaries increase to account for inflation. The 2023 WNBA salary cap was \$1,420,500, which is up from \$1,300,000 in 2020. Another reason for the same may be due to revenue growth, for example, the WNBA is projected to generate a combined team and league revenue of \$180 million to \$200 million in 2023, therefore it might allocate a larger portion of that revenue to player salaries.

The NBA chart helps highlight the improvements in the WNBA wage gap. The first observation that supports this is the drop in average salaries in the 2021 season, this is because there was an increase in average salaries for the WNBA in the same season. Secondly, the increase in average salaries from 2022 to 2023 was much greater for the WNBA than the NBA which reveals how the WNBA has become more successful in reducing the gender pay gap over the years even though NBA salaries are still much higher.

7. Conclusion

This research paper focused on the gender pay gap in the context of basketball, a sport often perceived as male-dominated. Analysis indicated that gender does influence salaries of players and that WNBA players are paid lesser than NBA players. Additionally, both groups show an increase in salaries in 2023. The purpose of the paper was to use the gender pay gap in basketball to highlight the discrimination against females and deep roots of patriarchal society that still persists in contemporary times. The literature and data analysed sheds light to the extent of the situation in basketball, and how it is just one example of a much more extensive issue. Through the results of the statistical analysis, one can understand that females are quite far from being paid the same as males. However, given the social structures that have formed over the years and influenced this disparity in the sports industry, the focus at hand should be the fight for equity over equality in athlete pay. Improvements in the pay gap should not be measured by comparing the pay of males and females, rather, it should be measured by how much better women alone are being paid. In order to see an overall change in attitude towards women in the world, this mindset should be manifested in different sectors as well, not just sports. It is important to keep in mind that this paper only took into account the most recent 4 seasons to form its conclusions. Furthermore, the data was representative of athletes belonging to specific teams of the NBA and WNBA. There is, therefore, the opportunity for this study to be conducted on a wider scale and consider a more extensive list of variables to derive a more accurate conclusion.

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