

An Analysis of the Effectiveness of Green Marketing Strategies in the NBA

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Abstract. The intersection of the sports industry and environmental sustainability is an area that has not been widely explored, particularly in the context of major sports leagues and professional sports in Western societies. Current research on this topic tends to be generalized and limited, failing to explore the full range of effectiveness. This study investigates the effectiveness of the NBA's green marketing strategies in mitigating its environmental impact. By examining various initiatives related to sports and the environment, arena construction, sports production, and fan impacts, the study attempts to assess whether these efforts have actually reduced the negative environmental impacts of the NBA industry, or whether they have primarily served as marketing tools. The study examines successes and identifies areas for improvement, making recommendations for improving the NBA's environmental sustainability and setting an example for the sports industry. This study uses literature survey and case study methodology to investigate, collect cases and critically analyze the environmental impact of the NBA industry and in developing green marketing practices. The aim is to assess the perspectives and limitations that are not widely scrutinized now and provide recommendations for the NBA's sustainability path in the future.

Keywords: Sports Industry, NBA, Green Marketing, Environmental Impact, Sustainable Practices.

1. Introduction

Sports are commonly acknowledged as being physically and intellectually beneficial, as well as healthy and active. They are generally accepted and practiced since sports not only improves physical fitness but also fosters social cohesiveness. Sports are a significant component of social culture and play a significant influence in North American society. This is especially noteworthy for major league professional sports in North America, including Major League Baseball (MLB), the National Football League (NFL), the National Basketball Association (NBA), and the National Hockey League (NHL) [1]. These leagues not only offer the pinnacle of competitive sports, but they also draw a sizable global audience, generating a sizable fan base and significant societal influence.

Even though sports are frequently portrayed in a positive light, a study of the relationship between sports and the environment reveals how professional and major league teams harm the social and natural environments irrevocably while frequently avoiding their environmental responsibility [1]. The public's ignorance of this problem contributes to the undervaluation of the significance of environmental preservation in the sports industry. Many individuals still ignore the environmental consequences of sports and view them as solely recreational and health-related activity.

In light of this, the major professional sports leagues bear an even greater duty to take the lead in actively reducing the sports industry's negative environmental effects and advancing the sector's overall growth in a more sustainable and environmentally friendly manner. The NBA is the pinnacle of basketball in terms of influence and popularity [1]. It is essential to include sustainability and raise awareness of the effects on the environment on a platform the size of the NBA [1]. This study focuses on the NBA industry as an example of the strategies and developments it has adopted in the field of green marketing, and assesses whether these initiatives are truly effective in solving the environmental problems caused by the industry. This study aims to reveal the actual effects of these initiatives, identify successes and shortcomings, and make recommendations for improvement to provide a sustainable reference model for the entire sports industry.

This study utilizes a literature survey and case analysis methodology, and will be broken down into multiple sections in order to thoroughly examine the green marketing tactics used in the NBA and their efficacy. In the first section, the history, philosophy, and significance of green marketing in the sports sector will all be covered in detail. The second section will examine the extent of the harm the NBA industry has done to the environment by gathering pertinent research that has already been published and by mentioning the harm the industry has done to the environment directly. In the third section, the strategies and operational measures implemented by the NBA league's departments and organizations pertaining to green marketing will be thoroughly examined. Using the findings from the previous study, the fourth section will evaluate the difficulties and effects that are now present while analyzing the efficacy of green marketing techniques in the context of the NBA market. The fifth section will offer important suggestions and concepts for enhancing the results. A synopsis of the results and broad suggestions for the future course and developments of the topics examined will be included in the study's conclusion.

2. Green Marketing

2.1. The History of Green Marketing

Green marketing began to take shape in the 1970s, when environmental conservation became more popular and businesses realized how their operations affected the environment. According to one definition, "green marketing" is marketing that seeks to create and encourage any endeavors that meet human needs and aspirations while reducing the negative impacts that these endeavors may have on the environment [2]. Green marketing gradually emerged as a significant component of corporate strategy by the turn of the century, when environmental regulations and public awareness of the environment increased. As a result, businesses were required to incorporate environmental awareness into all facets of their marketing campaigns.

2.2. Green Marketing in the Sports Industry

The sports industry is likewise seeing a rise in the significance of green marketing. Even if athletic events and activities have a lot to offer in terms of social and economic advantages, they also have a lot to offer in terms of environmental effects, including waste management, resource consumption, and carbon emissions. Sports organizations and events have an inherent benefit and obligation to encourage sustainable practices through the connection of sports fans and participants, as recognized by the United Nations Framework Convention on Climate Change (UNFCCC) [3]. *Transforming Our World: The 2030 Agenda for Sustainable Development*, published by the United Nations in 2015, included sport as a strategy for sustainable development for the first time and made it clear that sport is a growing factor in the achievement of development and peace because it fosters tolerance and respect, gives women and young people more power, empowers individuals and societies, and advances the goals of social inclusion, health, and education [4]. In addition to lowering the sports industry's environmental impact and advancing sustainable development, the use of green marketing in the sector also encourages viewers and fans to develop environmental consciousness, which has a beneficial social impact.

In actuality, environmental concerns and pro-environmental practices made their way into the sports sector as early as the Albertville Winter Olympics in 1992. In response to public criticism, the International Olympic Committee (IOC) and other professional sports organizations have since adopted sustainability programs [5]. However, it appears that efforts to improve the environment are not a major focus of today's sports marketing tactics, which are still driven by commercialization for profit and growing social effect.

3. Environmental Impact of the NBA Industry

3.1. Energy Consumption

Any form of large-scale human activity is likely to consume large amounts of energy. The building industry is responsible for around 40% of all direct and indirect CO₂ emissions, as well as more than one-third of all energy use worldwide, according to the International Energy Agency (IEA) [6]. According to data from the U.S. Energy Information Administration (EIA), between 2018 and 2050, the proportion of building power usage in overall energy consumption would almost treble [6]. Major professional sporting events like the NBA often require large energy investments. A professional sports arena can use up to 5-10 megawatts of electricity during an event, the equivalent of 5,000 U.S. homes [6]. Arenas must maintain a high standard of facility operations during the NBA season due to a variety of games and activities, including extended duration of operation for air conditioning, lighting, and other electrical equipment. NBA games are often played at night, which requires a lot of nighttime lighting, compared to other events that can be played outdoors during the day. A single game at the Staples Center in Los Angeles, for instance, may need the facility to use roughly 25,000 kilowatt-hours of energy. This power would emit a significant amount of CO₂ if it were generated using fossil fuels. With an average US emission factor of roughly 0.4 kg CO₂/kWh, only this section would produce roughly 10,000 kg of CO₂. In addition, the arena's heating and cooling systems, which need to be adjusted to seasonal and weather conditions to ensure the comfort of spectators and players, consume an equally large amount of energy.

In addition, during NBA games, there is a concentrated influx of fans and media that not only clogs the city's roads but also increases tailpipe emissions from the large number of vehicles gathered. These emissions contain a variety of hazardous substances, like PM 2.5, nitrogen oxides, and carbon monoxide, which have a direct impact on the quality of the air and pose a threat to human health [7]. For instance, on a game day, more than 18,000 fans may attend the Golden State Warriors' home, the Chase Center. Assuming that half of the spectators arrive in fuel-efficient vehicles, which emit approximately 120 grams of carbon dioxide per kilometer on average and cover an average distance of 30 kilometers each, these vehicles would generate approximately 162,000 kilograms of carbon dioxide in a single day [7]. Furthermore, the situation exacerbates the urban heat island effect, which is the phenomenon wherein the city's air quality is reduced due to the exhaust emissions from a large number of vehicles that create localized temperatures, which in turn affects the daily lives and health of those who live near the stadium. Increased symptoms of asthma and severe respiratory effects in newborns are the most common effects of traffic-related air pollution, which is roughly 30 to 45 percent more likely to have an impact on city dwellers who live close to stadiums [1].

And not only that, among the four major American sports leagues, the NBA was the most polluting in terms of travel during the 2018–19 season [7]. Teams traveled thousands of miles each season to play games which results in a significant amount of carbon emissions that contribute to climate change and other environmental problems. With 30 teams that play 82 games each, a significant amount of carbon emissions are generated throughout the NBA season due to air travel and ground transportation, which consumes a significant amount of energy and produces greenhouse gas emissions.

3.2. Waste Generation

About 25–30% of the food produced worldwide is lost or wasted. The Intergovernmental Panel on Climate Change estimates that 8–10% of greenhouse gas emissions caused by humans are attributable to food waste. In 2019, the U.S. Environmental Protection Agency projected that sporting events produced less than 40,000 tonnes of food waste annually [8]. It may occur as a result of inadequate ingestion as well as during preparation. The arena's food service often offers fast food items including pizza, hot dogs, hamburgers, and French fries during an NBA game. Suppose there are 20,000 spectators at a game and half of them buy this type of food. With the quantity of food that may be sold each day, even 5% of the food during each game going to waste would result in a significant

amount of organic waste. If this organic waste was not disposed of properly, it would break down in landfills and release greenhouse gasses like methane, which would contribute to global warming.

Meanwhile, plastic packaging is a significant source of waste. Plastic boxes, cartons, and cups are among the disposable packaging materials used for almost all food and drink items provided in arenas. Suppose further that at a game with 20,000 spectators, half of the spectators purchased food or beverages. Every game will produce between 10,000 and 20,000 pieces of disposable packaging, the majority of which are plastic and paper products that can be burned if improperly disposed of or dumped into landfills, rivers, oceans, wetlands, and other natural landscapes [7]. Plastics contain dangerous compounds that can contaminate streams through runoff, putting people, animals, and plants at risk. Moreover, the United Nations Environment Programme estimates that major sporting events might produce up to 750,000 plastic bottles every event [7]. Many new arenas have been constructed as a result of sports' explosive growth in popularity. According to Waste Management (WM), the major leagues' fan waste activities alone produce over 35,000 metric tons of carbon dioxide annually [9]. Thus, among many other important concerns that have a big impact on the environment, the NBA, a very influential professional league, has to carefully analyze how energy, waste, pollution are applied in arena operations and event preparation.

4. NBA's Green Marketing Initiative

Reducing carbon emissions, conserving resources, promoting sustainable practices, and increasing public awareness of environmental issues are the goals of NBA Green, a major initiative of the NBA to promote environmental protection and sustainability. The program was introduced in 2008 and aims to mitigate the negative environmental impact of NBA operations and promote a green transformation of the entire sports industry. The NBA has implemented a variety of measures to address the aforementioned concerns in order to meet its objective of reducing its carbon footprint by fifty percent by 2030 as part of the United Nations Framework for Action on Sport for Climate [9].

4.1. Green Construction and Operation

The NBA has taken several steps to improve energy consumption and reduce carbon emissions. Promoting LEED (Leadership in Energy and Environmental Design)-certified arenas is an important part of this. The most popular green building certification program in the world, LEED (Leadership in Energy and Environmental Design) offers a framework for cost-effective, healthy, and environmentally friendly buildings. Additionally, LEED certification reduces waste, pollution, and water use in all areas of the building, and there are four levels of certification: Certified (40–49 points), Silver (50–59 points), Gold (60–79 points), and Platinum (80+ points). Higher points represent healthier spaces and buildings that conserve more money and resources. With ten LEED-certified arenas to date, the NBA has more LEED-certified arenas than any other professional sport in the US.

The Portland Trail Blazers' home arena, the Moda Center, is now the first sports venue to receive LEED O+M (v4.1) Platinum Certification. The arena's attempts to lessen its environmental effect through waste management, water restoration, energy efficiency, and sensible food and transportation practices have resulted in the certification, given by the U.S. Green Building Council [10]. In an effort to use less water, the Moda Center installed low-flow toilets, smart irrigation, as well as drought-tolerant landscaping. In terms of transportation, the Moda Center facilitates public transportation, biking, and walking to games, among other activities. Electric vehicle charging stations have also been constructed outside the arena.

In addition, the NBA has taken steps to reduce the environmental impact of travel. By optimizing scheduling and reducing unnecessary travel, NBA teams have reduced the number and distance of flights during the season. For instance, teams are now more likely to play both the Lakers and the Clippers in the same trip to Los Angeles, the Nets and Knicks in a trip to New York, or the Heat and the Magic in a trip to Florida, rather than going back and forth on separate occasions. The NBA can greatly lessen its influence on the environment, including carbon emissions, by requiring each club

to travel less. The NBA 2022–23 Social Impact Report states that in order to improve player health and cut greenhouse gas emissions from team travel by 39%, the league decreased the amount of team miles traveled by 11% for the 2022–2023 season [11].

4.2. Waste Recycling

The NBA has also taken several initiatives when it comes to recycling waste. First, many teams and arenas participate in food donation programs. Once again, take the Moda Center, home of the Portland Trail Blazers, for example. Through their partnership with DeSantis Landscapes, a local Portland gardening firm that contributes food waste and turns it into soil, the Moda Center has saved one million pounds of food waste from ending up in landfills [10]. The Moda Center Environmental Services crew will separate all debris after each game to make sure that materials end up in the correct waste stream, while all products sold in the arena are recyclable or compostable [10]. Local, organic, and hormone-free produce is given priority in the arena’s food strategy through collaborations with Levy Restaurants and other merchants, and extra food is given to nearby families in need [10].

Secondly, as an alternative to conventional single-use plastic products, the NBA encourages the use of recyclable materials. For instance, the Los Angeles Lakers’ home arena, the Staples Center (now known as Crypto.com Arena), discovered that after experimenting with r. World reusable cups, they were able to stop over 23,000 single-use cups from ending up in the trash and recycling in just two nights, resulting in an equivalent 355 pounds of carbon emissions reduction [7]. Consequently, the AEG-run Crypto.com Arena declared that it will gradually replace all single-use cups with r. World starting in August 2024 [7]. This move will prevent millions of plastic cups from ending up in landfills every year.

4.3. Social Media Promotion

As part of the broader organizational work on environmental issues, reaching out to fans has become a priority. According to the United Nations, sports organizations can leverage their social media platforms to encourage sustainable and beneficial habits among their fan base.

Thanks to online streaming and social platforms, the NBA has increased its global audience and its visibility has grown significantly over the past few years. In addition to cable TV, people can now watch games on online streaming platforms such as NBA League Pass and YouTube TV. In addition, the NBA has official accounts on all major social media platforms such as Facebook, Instagram, and Twitter, which they use to their advantage to increase their popularity by interacting with their fans. And having a strong connection with fans often makes it easier for teams and players to spread their message.

The NBA used its Instagram account to publicize the “NBA Green Week” campaign in 2019 [12]. It highlighted teams’ environmental protection efforts, such as players planting trees and teams promoting jerseys made of eco-friendly materials, through brief videos and graphic posts. The NBA also created the #NBAGreen hashtag on Twitter to encourage fans to share their everyday eco-friendly actions and to honor those who have made exceptional environmental contributions.

In 2021, the NBA also launched the “NBA Footprint Quiz,” an interactive online campaign designed to encourage fans to take personal responsibility for their carbon footprints. By providing answers to a series of questions regarding their daily routines—which span a wide variety of topics from energy use and transportation to everyday consumption—fans can calculate their carbon footprint. Fans who pass the quiz will get a comprehensive analysis on their current carbon footprint along with customized advice on how to lower it.

4.4. Offline Events

NBA actively engages in a range of offline environmental protection promotional initiatives in addition to its online platform in order to increase public awareness of environmental protection through hands-on activities and in-person contacts. In an effort to encourage teams and fans to practice environmental responsibility on game days, the NBA has held “Green Arena Days” for a

number of seasons [13]. At the TD Garden Arena, for instance, the Boston Celtics hosted a Green Arena Day event where they invited environmental organizations to set up booths, provide fans environmental information, and offer advice on reducing carbon emissions and using less electricity [13].

During the season, a few NBA teams collaborate with educational institutions to introduce environmental education initiatives aimed at increasing students' awareness of the environment. For instance, the Los Angeles Lakers worked with neighborhood schools to implement the "Green Campus" program, which involved bringing in environmental specialists and player representatives to give talks and engage students in interactive activities about ways to lessen their carbon footprint and preserve the environment on a daily basis [7]. NBA teams also actively take part in neighborhood environmental preservation initiatives and educate the public about environmental conservation through useful actions. Fans' environmental awareness and sense of involvement are increased when players engage in these activities, not only by planting trees themselves but also by educating the participants about the value of environmental protection and tree planting.

5. Drawback of the Initiatives

5.1. Fan Engagement

The ability of the NBA's green marketing to truly impact fans is a key factor in evaluating its effectiveness. In theory, it seems obvious to engage fans in sustainability through sports, but in reality, there can be a fine line to walk. Although the NBA promotes environmental protection through various channels, not all fans are highly concerned about environmental issues. Many fans care more about the excitement of the game and the performance of their team, and environmental information may not play a significant role in their daily lives. While some fans who attend games primarily want to lose themselves in the excitement of sports and escape the everyday grind, others who identify as more environmentally conscious will be curious to learn whether their team's sustainability initiative is having a real impact, and will be concerned that it may just be a PR stunt disguised as environmentalism.

Furthermore, surveys have indicated that while some fans have expressed support for the NBA's environmental initiatives, the percentage of those who actually take real action is not high because the NBA has not always prioritized environmental protection above all other league operations [14]. This means that even if fans accept the concept of environmental protection, it will be difficult to get them to change their behavior in their daily lives. For example, reducing the use of single-use plastics and choosing public transportation both require long-term education and relentless efforts, not just a short-lived campaign.

Moreover, it appears that the NBA does not take into account the applicability of the environmental initiatives it supports. A number of the promotional points may be disconnected from the realities of the average fan's life. For instance, promoting the use of solar energy equipment is less feasible for fans who live in apartment buildings. Also, some NBA teams' green marketing responses are advertised in front of their fans, but they engage in a range of community services that appear to contradict the purpose of their promotions.

5.2. The Possibility of Greenwashing

Critics have noted that the NBA's environmental activities could be viewed as "greenwashing," or improving the NBA's reputation through supposedly ecologically beneficial programs that do not yield many real benefits [15].

The public's trust in the NBA's environmental commitment is affected by a number of factors, including the fact that some teams claim to use renewable energy but do not provide detailed energy usage data and independent certification reports. Despite the NBA's many environmental initiatives, its specific effects and data disclosure transparency may be lacking. Specific examples include

whether detailed reports on carbon footprints and data on emissions reductions are publicly available and can be independently audited by a third party.

Second, some actions related to the environment could be more symbolic than actual. Tree-planting events and green match days, for instance, might be less about actually having a modest impact on the environment and more about drawing media attention and portraying an environmentally benign image. Even if hundreds of trees may be planted during a match day tree planting event, this compensation is obviously insufficient when considering the carbon emissions of a complete season [15]. The information that is now available seems to be presented more as part of a public awareness effort than anything else. The NBA does not appear to be trying to show off its sustainability performance or to convey to the public that environmental sustainability is a top priority for the company.

However, sustained dedication and ongoing development are necessary for environmental projects to be successful. The NBA's environmental measures might be much less effective if they are just partially implemented without a long-term plan. It may be the case that some teams only implement environmental measures during NBA Green Week, and that they resume regular operations following the event, which makes it challenging for these programs to yield long-term environmental advantages [15]. Overall, there seems to be a discrepancy between the NBA's stated sustainability objectives and its actual environmental performance, and there are good reasons to doubt the efficacy and reasoning behind these endeavors.

6. Suggestions

6.1. Increased Transparency and Data Disclosure

The scope of sustainability measures in the NBA industry has been shown by academics, but as the research shows, these efforts are only focused on informing stakeholders—fans primarily—about the organization's environmental initiatives [14]. NBA should regularly publish detailed environmental impact reports covering carbon emissions, energy use, waste management, and water consumption. These reports should be audited by an independent third party to ensure the accuracy and credibility of the data. Moreover, the NBA needs to implement a transparent carbon footprint calculation methodology and publicize carbon emissions data for each season. By partnering with environmental organizations, detailed carbon benchmarks and goals can be established to gradually reduce the overall carbon footprint [14].

It would be reasonable to expect a sport organization to publicly declare its intention to state its current environmental performance on a variety of initiatives if the organization places a high priority on environmental sustainability and has demonstrated this commitment through memberships, certifications, and international commitments.

6.2. Enhance the Practical Effectiveness towards Fans

Environmental promotion should be closer to the lives or actions of fans, such as easy and convenient ways for fans to reach environmentally friendly behaviors at the game site. To have fun and support their team, people desire to visit these arenas. The key to all of this is that the NBA must understand how to use sustainable values in the appropriate setting, at the appropriate time, with the appropriate people, and in the appropriate attitude [16].

For example, the Denver Nuggets' home arena replaced all disposable plastic cups with recyclable aluminum cups. Engaging with fans in such a very natural way does not distract them from watching the game and having fun. Moreover, recycling cups can be made into a "gamification experience." Fans can vote for their favorite player or the game's MVP by, for instance, placing their cups in recycling bins labeled with the names of the players.

Additionally, getting players personally involved in future events is one way to make fan engagement even higher [17]. Whether it is active voices and interactions on social media platforms, hands-on demonstrations and experiences of players at many practices, or players personally using

some of the innovative, environmentally friendly products, the NBA league needs to realize that the loyalty and emotional attachment of sports fans is strong enough for them to actively follow and emulate the actions of their favorite players.

7. Conclusion

This study examines the actual effectiveness of the NBA's green marketing strategies in reducing its environmental impact by analyzing them. The study finds that despite the various environmental measures taken by the NBA, their real effectiveness remains to be verified.

According to the report, the NBA has implemented a number of green marketing strategies, such as utilizing social media to raise awareness of environmental issues, promoting LEED-certified venues, streamlining scheduling to cut down on travel, and establishing a waste recycling program. The real efficacy of these initiatives is debatable, though, because of issues including poor data disclosure and openness, little fan involvement, and potential for greenwashing with some of the environmental initiatives.

Furthermore, the NBA's environmental activities will always serve as a model for other sports organizations and businesses to encourage more extensive environmental action, as one of the most powerful sports leagues globally. In addition, the NBA has enough allure and appeal to increase global fan understanding of environmental issues, particularly among younger fans. Therefore, even though the NBA's current programs have limitations, its environmental protection measures have helped spread and apply the notion of sustainable development to some extent, establishing the groundwork for future improvements.

The first restriction of this study that the investigation revealed is the collecting of data. The study was forced to rely on news materials and public accounts because the NBA had not disclosed all of its environmental impact statistics, which may not have accurately depicted the real situation. Furthermore, the study lacked observation and assessment of long-term consequences and was primarily concerned with environmental interventions implemented in recent years. Thus, the following areas can be the subject of future research. To ascertain the sustainability and true environmental impact of the NBA's environmental activities, it is first necessary to monitor and assess their long-term consequences. Second, to find best practices and encourage their implementation, contrast the NBA's environmental activities with those of other major sports leagues. To find more efficient means of educating people and encouraging environmental engagement, extensive study will be carried out on the responses of fans and behavioral modifications to the environmental initiatives. The NBA needs to strike a more sensible balance in the future between environmental responsibility and business interests to make sure that its green marketing plan is more than simply a showpiece and actually advances social progress.

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