# Study of Sports Analytics in Making Strategies in Sports: A Meta-Analysis

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## ARTICLEINFO

## ABSTRACT

This case study was an exploration of how players, sport coaches and teachers use analysis to improve performance and making strategies in any sports. The study helped to reveal the usage of performance analysis and its perceived advantages and barriers. The study helped to determine frameworks for practical use by professional players and coaches. Data revealed a lack of use due to the lack of understanding of how to use performance analysis to improve sports performance as well as making strategies in sports. Professional development remains a high need in education and the study revealed self performance analysis as a viable option as a professional players and coaches. In this study the need for training on how to utilize performance analysis and frameworks put into place for players and instructional coaches.

**Keyword:** performance, sports analysis, making strategies, sports

## INTRODUCTION

Sports perforrmance analysis is the use of analyse the performance of players. It uses the latest technology to help players improve their skills and have an advantage over the opponent. We have different types of sports performance analysis where videoes can be effective. In sports performance analysis coaches and players can improve their tactics, techniques, behavioral etc. Coaches have a level of expertise that allows them to help mold and improve people into a better version of themselves. Coaches have many responsibilities, including building relationships being an encourager and demostrating the right way to do somthing. Visual attention plays a crucial role in all tasks involving perception and action, particularly in sports. In highly dynamic and constantly changing scenarios, players need to flexibly adjust their visual attention while simultaneously performing various activities to act successfully, requiring continuous attention throughout the process[1,2]. Nakayama and Mackeben[3] first linked perceptual research to attention by dividing it into instantaneous and continuous attention. This study focused on continuous dynamic attention, involving multiple moving objects simultaneously over a period of a few seconds. Continuous attention may be static or dynamic, as the stimulus may remain stationary, or motion may occur

during sustained attention to the target. The process of multiple objects tracking (MOT) involves continuous attention. The core aspects of attention include selectivity, capacity limitations, and subjective effort; MOT serves as a visual illustration of these three components of attention

## What is Sports Analytics?

Sports analytics is the study of athletic performance and business health to optimize the processes and success of a sports organization. Three are essentially two components to sports analytics:

On-field data analytics. This area involves tracking key on-field data metrics to influence methodologies that may be used to improve in-game strategies, nutrition plans, and other vital areas that could ethically boost athletes' performance levels. It seeks to answer questions relating to on-field performance, such as "which soccer player has created the most chances in Europe?" or "which player has run the fastest over 20 meters?" etc.

Off-field data analytics. Here, the focus is on the business side of sports. It involves monitoring important off-field data metrics such as ticket sales, merchandise sales, fan engagement, etc. This type of data analytics seeks to assist decision-makers in sporting teams make better decisions directed toward increased growth and profitability.

## Statement of Problem:

The present study was aimed to examine study of sports analytics in making strategies in sports.

## Method:

The 100 review procedures followed the Preferred Systematic Reviews and Meta-Analysis. Following recent best practices to enhance transparency, replicability, and robustness of systematic reviews in sport and exercise psychology.

## Result of the Study and Conclusion:

The global sports market grew from $354.96 billion in 2021 to $496.52 billion in 2022, according to the business research company's research, making it one of the biggest markets in the world. As spending in the global sports market increases, sporting teams are much more committed to investing in sports data analytics for a competitive edge, hence the projection of the sports analytics market reaching upwards of $4.5 billion by 2025.

## Informed decision-making

Sports data analytics can be a useful tool for making important strategic decisions. For example, when Thomas Tuchel, former Chelsea Football Club manager, was asked why he brought on goalkeeper Kepa Arrizabalaga late into extra time, he responded, "So we had some statistics, we were well prepared, that Kepa is the best in percentage in saving penalties." He added, "There is proof that Kepa is better at this discipline." Chelsea went on to win the penalty shootout, with Kepa saving two penalties in the process.

## Increased revenue

Generally, companies investing in data and analytics can experience notable financial returns. According to research conducted by McKinsey & Company, the average initial increase in profits from big was six percent, which increased to nine percent for investments spanning five years.

## Current Scenario



Figure 2: Data provided from articles and news

The Development of the Sports Analytics Industry
Sports and data analytics have been tied closely together for a long time. Baseball was one of the early

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adopters of sports analytics, with Earnshaw Cook publishing Percentage Baseball in 1964. However, several statisticians would likely credit the popularization of sports analytics to Billy Beane, Oaklands Athletics' general manager from 1997 to 2016.

Up until 2002, coaches and athletes in baseball tended to turn a blind eye to deeper data analytics in favor of instinctive gut feeling, a player's aesthetics, or shallow statistics like batting average. Billy Beane, strapped with a minimalist budget, noticed that getting runners on base was vital for scoring more runs. With this enlightenment, Beane focused his strategy on

acquiring overlooked starting pitchers – usually for a fraction of the price of a big-name pitcher – that have a high on-base percentage with the idea that teams with higher on-base percentages were more likely to score runs.

## How Different Sports Use Analytics

Although the fundamental purpose of sports data analytics is universal – to gain a competitive advantage through statistics and data analysis – different sports deploy varying methods to collect and analyse data efficiently for their sport.
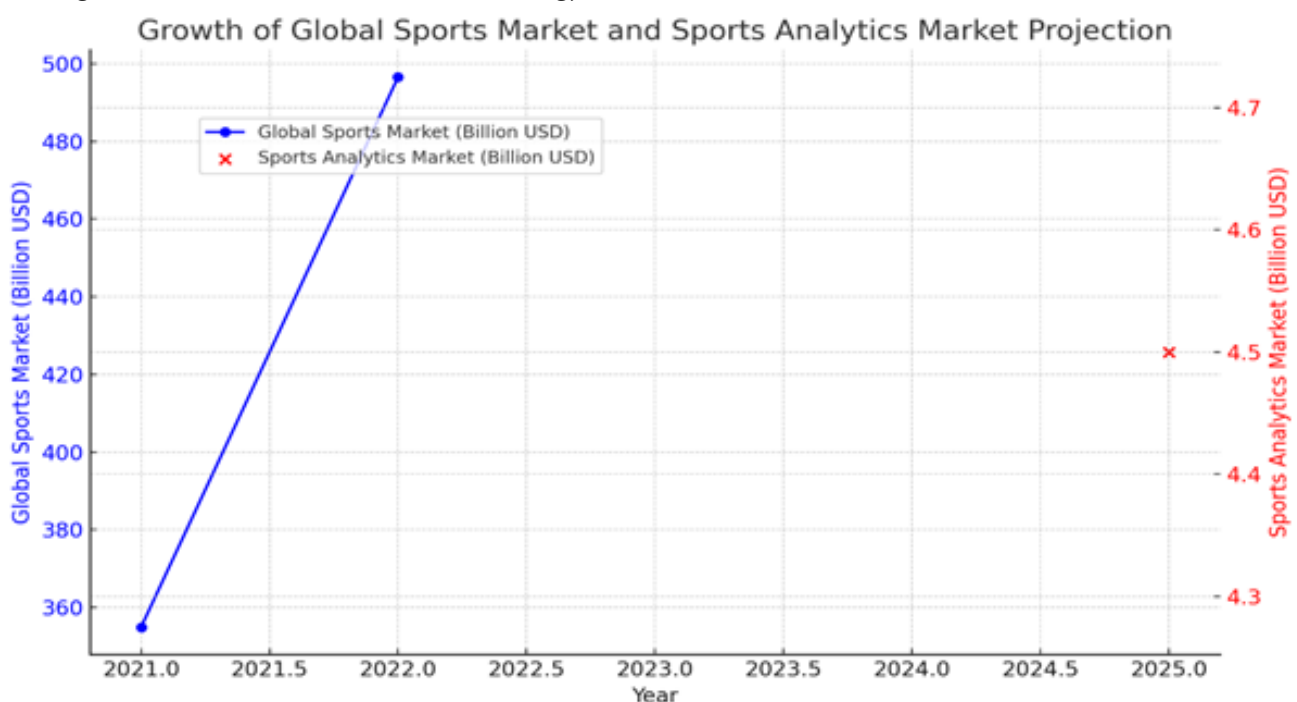


Figure 1: Global sports market grew (2021- Present time)

- The blue line represents the global sports market growth, increasing from $354.96 billion in 2021 to $496.52 billion in 2022.
- The red dot shows the sports analytics market projection, expected to reach $4.5 billion by 2025.
- As global sports market spending increases, teams invest more in sports analytics, leading to its projected growth.

## Basketball

Daryl Morey was one of the first NBA general managers to implement advanced statistical metrics as a key part of player evaluation. Now, most NBA has sports data analysts as staff on their teams. Their role is to support coaches and players with data to aid them in maximizing on-field performance and identifying undervalued players.

At the most elite level of basketball, teams use data-tracking cameras at all angles of the basketball arena

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to track every movement made by each player on the court. This data is then synced with the players' statistics to provide a full breakdown of players' performance.

A sports analyst will likely watch their designated sporting event, prepare commentary, and deliver that commentary on air or in print. Thus, they must have exceptionally strong analytical and communication skills as it accounts for a large proportion of their day-to-day responsibilities. In addition, sports analysts have a deep knowledge of their chosen sport, which includes a good idea of the historical context and key statistics that define the competition.

Sports analytics involves collecting and analysing relevant historical statistics that can provide a competitive edge to a team or individual. With more sporting teams pouring investment into data analytics, several sports and statistics enthusiasts are flocking towards a career as a sports analyst.

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