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Introduction

A course on the Economics of Sports provides a unique opportunity to Economics

Departments. Because of the outsized interest of the American public in sports, an undergraduate course in the Economics of Sports can be a magnet that attracts students who otherwise might shy away from an upper-level Economics course. It is far more likely to attract non-majors than our traditional offerings in labor economics or monetary theory.

An Economics of Sports class is also much more likely to create spillovers to the rest of the department than other classes. An Economics of Sports class is necessarily interdisciplinary in nature, incorporating a wide variety of Economic sub-fields. Students in this class get a taste of such standard courses as Industrial Organization, Public Economics, and Labor Economics. If Economics of Sports sparks interest in those sub-fields, it could enhance enrollments in them as well, contributing credit hours and, ideally, attracting additional majors and minors.

Finally, as football coaches are fond of saying, sport is a metaphor for life. Many of the broad social issues that we confront – from distended income distributions to race and sex discrimination to gender identity – have played out in the sports arena. Moreover, because so much data on performance and earnings are readily available in sports, it is possible to conduct or assign empirical studies that would be difficult or impossible to perform in other contexts. Finally, a course in the Economics of Sports provides a "safe space" for students to discuss sensitive issues at arm's length, enabling the class to conduct productive discussions without unduly inflaming passions.

Economics of Sports also presents the instructor with a unique set of challenges. Most notably, it covers a broad array of sub-fields of economics and attracts students with widely

varying skills and expectations. As a result, the class requires particularly careful preparation by the instructor.

In this paper, I provide a blueprint for designing an Economics of Sports class. I shall describe several of the challenges that instructors might face when teaching the Economics of Sports and explain how I have dealt with them. I shall also note several strategies for enhancing the student experience in this class. Finally, I shall show how one can use this class to address issues of inclusion – and exclusion. The suggestions I provide will necessarily be idiosyncratic in that they are based on my own experiences teaching such a class at Temple University. However, I believe that the broad principles expressed here will help make teaching this course an enjoyable and rewarding experience, regardless of the skills of the students or the specific interests of the instructor.

In the next section of this paper, I highlight the many challenges facing the instructor of an Economics of Sports class and detail several ways to overcome them. In section three, I note several ways that technology and other innovations can add to student learning and enjoyment. Section four relates how an Economics of Sports class incorporates concepts of diversity and inclusion/exclusion. A conclusion follows.

Challenges Facing the Instructor

Preparing to Teach the Course

Perhaps because it is so new to the curriculum or perhaps because of its interdisciplinary nature, there is no commonly accepted approach to teaching an undergraduate Economics of Sports class. The instructor of an undergraduate Economics of Sports class thus confronts

several decisions when planning the course that do not necessarily occur for other subfields of Economics. The first decision is the level at which to teach the class. A class conducted at an advanced level could have calculus, econometrics, and intermediate theory classes as prerequisites and work largely from primary source material. Most classes, however, are likely to be at the intermediate level, requiring Microeconomics and Macroeconomics Principles classes and perhaps an introductory statistics class. Finally, one could even teach the class at a "pre-introductory" level. Such a class would use sports to introduce students to basic economic concepts. This essay focuses on the second option, an intermediate-level class, as it is likely to be the situation that most instructors face.

In addition to setting the appropriate level of the course, the instructor must also determine what the course will cover. This is not a problem for most other upper-level courses, which have longer traditions and have developed clear sets of organizing principles. Perhaps the most important decision here concerns the focus of the class: is it a course that emphasizes sports or a course that emphasizes Economics?

Courses that focus on sports are particularly useful in Sport Management departments as part of a broader curriculum that includes courses on the finance and marketing of sports. The course could use Economics to analyze such phenomena as Manchester City's recent rise to prominence in the English Premier League or to ask whether salaries in professional sports truly reward a player's productivity. The newly popular field of sports analytics, which uses the wealth of new data to analyze player performance, could form a major part of such a course (or be a course unto itself).

Courses in Economics Departments are more likely to use sports as an example of economic theory rather than as the central focus of the class. In effect, the course is a "Trojan

Horse" that allows instructors to teach economic concepts to students whose eyes would glaze over if they saw the ideas presented in a different context.

As befits a course that is still relatively new to Economics curricula, there are relatively few textbooks from which to choose. There are four major Sports Economics textbooks on the market: Blair (2012), Fort (2018), Kesenne (2015), and Leeds, von Allmen, and Matheson (2018). These texts can all be used by classes that require some Economics background but are not limited to students with extensive skills. They are also all firmly in the "teaching Economics" branch of the literature.

The topics that these books cover show that, while there is considerable diversity in the level and approach of the texts, they share a broad agreement as to the topics that should be covered in a Sports Economics course. All the texts cover the industrial organization of sports (i.e., how teams and leagues maximize profit maximization and monopoly power in sports) and how labor markets function in professional (and amateur) sports. All but Kesenne (2015) also cover public economics and the relationship that sports teams and leagues have with state and local governments. The fact that Kesenne does not deal with this subject probably stems from its being a European text. Local governments have traditionally been less involved the construction of facilities for local franchises in Europe than in the US, so there is less reason to treat the subject. The texts differ significantly in the emphasis they place on each topic, on the specifics of the topic they cover, and on their level of technical rigor, but switching from one text to another is unlikely to require a wholesale reorientation of the course.

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¹ There are many more books on the subject, but I restrict myself to general texts that do not restrict themselves to a specific aspect of Sports Economics or to the economics of a specific sport.

Whatever text one chooses, one cannot expect to teach the Economics of Sports successfully by simply mastering the textbook. Because so much happens on a day-to-day basis in sports and because, for better or worse, many students in this class are far more familiar with the sports page than the business page, instructors relying solely on textbook examples will appear stilted and out of date. The first six months of 2020 alone have seen seismic shifts in sports, from the postponement of the 2020 Olympics to a brief strike by athletes in virtually all the major North American sports to renewed controversy over eligibility to participate in women's sports. While a subscription to *Sports Illustrated* might not be necessary, the instructor must make a conscious effort to keep up with current events *and* to incorporate them into lectures and class discussions.

Student Expectations

If the instructor chooses to emphasize the economic aspects of the class, it becomes *very* important for her/him to communicate this emphasis to the students immediately because many students sign up for the course under a false set of expectations. The mismatch between student perception and reality is probably greater for this course than for any other in the Economics curriculum. Many students – mostly male – sign up for the class expecting to talk about the fortunes of the local professional baseball team or the college's football team. To prevent any such misconceptions, it is vital for the instructor to make a point of announcing on the first day of class that s/he is happy to discuss baseball scores "outside of class" but that we talk about Economics when we are in class.

Student misperceptions of course coverage lead to a related misconception: that the student believes he – and it is almost always a "he" – is already an expert on the subject because he is an avid sports fan. This is a problem that instructors of advanced courses in labor economics or

monetary theory rarely, if ever encounter. It is vital to dispel both these misperceptions from the very beginning of the course.

At the same time, emphasizing that the course is an Economics course with no need for expertise in sports can reassure other members of the class. These students, disproportionately women, often come to the class afraid that they will be at a severe disadvantage because they do not know what a fair catch or the infield fly rule is.² Assuring these students that they will be assessed according to their understanding of Economics and not the arcana of sports reassures them and greatly improves the class's atmosphere.

Finally, one of the great joys of the course, the diversity of the students who enroll in it, requires some additional attention by the instructor. Because Economics of Sports classes attract students who might not otherwise take an upper-level Economics class, the students can also have an unusually wide range of backgrounds and abilities. In addition to Economics majors, one might encounter Journalism majors, who have ambitions of being sportswriters, Math majors who want to develop a new sports analytics algorithm, or English majors who happen to be on the gymnastics team. Students need to know from the outset what skills the instructors require and what skills they expect the class to master over the course of the semester (e.g., the ability to estimate and interpret a regression equation), and the instructor must be prepared to deal with large differences in abilities. I address one way to deal with the wide range of abilities in the next section.

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² One year, an Israeli member of Temple's women's volleyball team, approached me almost in tears after the first class, in which I had mentioned the market value of the Dallas Cowboys. She protested that she had no idea what cowboys had to do with sports. She went on to earn the highest grade in the class.

Using Technology and other Teaching Innovations

Recording Mini-Lectures to Provide Remedial Material

Because an Economics of Sports class tends to attract a more disparate group of students than the standard upper-level Economics course, many students will need to refresh their memories of even basic Economic concepts, and some students may have to learn several basic concepts for the first time.³ Unfortunately, backfilling material from introductory classes can take time away from discussion of how these concepts apply to the context of sports.

Fortunately, technology provides a solution to this dilemma.

Thanks to the coronavirus pandemic, remote learning platforms, such as Zoom or WebEx, are now familiar to most faculty. In addition to conducting classes, these platforms enable instructors to record remedial mini-lectures lasting five to ten minutes that can then be posted on the course's LMS site (e.g., Canvas or Blackboard) for the student to watch before class. The mini-lectures enable a student who has forgotten what causes demand and supply curves to shift or who has never fully understood consumer and producer surplus to reach at least the minimally required level of mastery in these subjects.

It is, of course, one thing to make material available and another to get students to use it.

Fortunately, in addition to allowing the instructor to provide supplemental material, technology helps the instructor to provide the necessary carrot and stick to ensure (or at least increase the probability) that all students will take advantage of the material. Experience has shown that, with

³ While this problem is particularly acute in an Economics of Sports class, the problem – and its resolution – applies to almost any undergraduate field class.

no incentives in place, it is likely that only the best students in the class – those least in need of the remedial material – will be the ones to use it.

Most course LMS sites now enable instructors to post quizzes or exams online.

Instructors can easily create a simple quiz that assesses whether their students have watched the mini-lecture (or who have already mastered the material and do not need to watch it) prior to the class that applies the concepts in question. Creating a quiz does not require a major investment of the instructor's time. I have found that a straightforward three-question, multiple choice quiz is all that is required.

As with all online assessment, cheating on these quizzes can be a problem, but the instructor can minimize this risk in several ways. First, the point of the quiz is formative rather than summative; it is designed to ensure that the student has watched the mini-lecture, not to assess the student's mastery of the subject matter. Hence, the quiz should be relatively easy and should not count heavily toward the student's grade. It should count for just enough to hurt students who do not do the assignment or do not take it seriously. Such low stakes should reduce the incentive to cheat. Other actions can reduce the ability of students to cheat on such a quiz. For example, the LMS typically allows instructors to randomize the order of questions and of the answer options. The instructor can also set up a "question bank" from which the LMS randomly selects questions for each student. As a result, no two students are likely to have the same quiz. Finally, setting relatively narrow time limits for students to take the quiz makes it difficult for students to seek help from others and complete the quiz in the time allotted.

Using Film Clips for Education and Enjoyment

In addition to aiding the instructor outside of class, technology can play a major role in the class itself. Indeed, few Economics courses lend themselves as readily to using the internet as the Economics of Sports. Judicious use of brief film clips can substantially enhance student learning and make the course much more fun. This can be done in several ways with several different goals in mind.

One of the most enjoyable ways to use film clips is to employ them as an icebreaker. One can show them at the beginning of class (or as students are filing in) to ease the class into the day's lecture. For example, I frequently express my preference for baseball over football by showing George Carlin's comparison of the two sports. (A highly idiosyncratic, brief sampling of film clips and their uses appears in Table I.)

Instructors can also use film clips to enhance their teaching. One can, for example, illustrate Economic concepts by showing clips of sports events themselves. This is particularly useful when the clips are of sports with which students are unfamiliar or of events that did not take place during their lifetimes. Such clips can both illustrate a concept and expand a student's conception of sports. One can, for example, demonstrate gains from specialization by comparing film clips of Peggy Fleming's gold medal performance in the 1968 Winter Olympics – when skaters still had to trace "school figures" and could not rely solely on superior jumping or spinning skills to win competitions – with those of a more recent performance, such as Mao Asada's winning routine at the 2010 World Championships. The contrast between the two performances is jarring. Fleming lands jumps that even a low-ranked skater would not find particularly challenging today, while Asada lands two triple axels – the most difficult triple jump, which was rarely attempted by *men* in 1968 – in the first minute.

Similarly, showing clips of athletes from bygone eras helps to make the athletes more alive and the material more immediate. In my discussion of race in sports, I make the point that Jackie Robinson's breaking of the color line in baseball may not have been possible without the achievements of the great heavyweight boxer Joe Louis, particularly his two matches with Max Schmeling of Germany in the 1930s.⁴ As part of the discussion, I show clips of the two Louis-Schmeling matches, emphasizing the implications of each match for African Americans and for American sports fans in general.

Because sports play such an outsized role in American society, there are also many accounts of sports events or of sports figures available online. These clips can help students to see the role sports play in settings outside their immediate experience. For example, to show how ethnic communities can adopt and relate to "their" team, I frequently use the example of the Montreal Canadiens. Today, most US students have no idea how important the Canadiens were to the ethnic identity of French-speaking Canadians. Some historians, though, trace the origins of the Québécois separatist movement to the "Richard Riot" of 1955, when French-speaking residents of Montreal protested the suspension of star player Maurice Richard on the eve of the Stanley Cup playoffs. To illustrate the importance of the Montreal Canadiens for Québécois identity in the 1950s and 1960s, I frequently play a recording of a televised report on the funeral of Maurice Richard.

Finally, popular culture provides many accounts – both fact-based and purely fictional – that demonstrate economic principles. One of my favorites is a scene from the movie *Bull Durham* in which "Crash" Davis, played by Kevin Costner, bemoans the fact that one measly

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⁴ A particularly good source for information on this topic is Margolick (2005)

"groundball with eyes" per week can separate a career minor leaguer like him from a star player in "The Show." This scene explains the winner-take-all division of spoils that results from Sherwin Rosen's superstar effect (Rosen, 1981) better than any PowerPoint slide presentation.

The Internet and Sports Data

The internet also is a source of abundant data. Indeed, one of the attractions of the Economics of Sports as a field of research is the existence of precise measures of pay and job performance. Such measures allow economists to analyze all sorts of economic problems, from the tendency of markets to generate highly skewed distributions of income to gender differences in responses to incentives, that would be difficult or impossible to analyze in almost any other setting. Data on everything from salaries in the NFL to high jump results in the 2016 Olympics are available on an array of websites, a sampling of which can be found in Table 2.

The presence of such a plethora of data makes empirical projects a very rewarding aspect of an Economics of Sports class. Departments in schools that have "writing across the curriculum" requirements may therefore find the Economics of Sports a popular option for a writing intensive class. Empirical projects can take a variety of forms. At one extreme, they can be tightly focused exercises in which the instructor leads students through a series of steps to answer a set of prespecified questions. At the other extreme, they can be free-form term papers.

Even the free-form papers require considerable forethought and guidance, however, as the wide range of backgrounds and abilities in Economics often grows even larger when it comes to the econometric skills required for a major empirical assignment. Anyone assigning an empirical project in a class that does not have Econometrics as a prerequisite must be willing to devote class time providing a guide to how one runs and interprets basic OLS regressions. The

instructor should also be prepared to spend considerable out-of-class time helping students with weak empirical backgrounds.

Because a term paper is likely to be the students' first major writing exercise in Economics, the instructor will also have to teach the class about the structure of an Economics paper. Fortunately, there are several useful resources to assist the instructor in teaching writing. One particularly helpful guide is the annotated paper created by Dvorak (2007), which is also available online.

Classes whose students lack the skills or whose instructors lack the time for a major empirical project might turn to a different use of technology for an end-of-semester class project. *Pechakucha* provides an enjoyable and potentially rewarding summative experience for students. *Pechakucha*, literally translated as "chitchat" from Japanese, is a highly stylized form of slide presentation. In its strictest form, *Pechakucha* consists of 20 slides, each of which appears for exactly 20 seconds. In addition, a strict *Pechakucha* consists solely of images. None of the slides can have any bullet points, data, or added verbiage. The presentation depends completely on the images and the words of the presenter. In a concession to the reality of Economics, I have modified the strict *Pechakucha* to allow up to four slides with graphs or tables.

Pechakucha provide a nice middle-ground for an Economics of Sports class. They allow students to dig more deeply into a topic that interests them, but they do not make the demands that a term paper or major empirical project would on both the student and the instructor.

Pechakucha work particularly well in small classes, as they can eat up a lot of time when the class gets large: each presentation lasts six minutes and 40 seconds (20 slides*20 seconds). In addition, students' (and professors') attention can falter after more than a few such presentations in succession.

Diversity and Inclusion

Expanding Students' Horizons

The Economics of Sports provides ample opportunity for introducing students to issues of diversity and inclusion. Some of these topics are familiar from non-sports contexts. Others are more specific to the sports world but are themselves useful for getting students to see a larger world than they had previously though existed.

While many of the students in an Economics of Sports class claim to be serious sports fans, only a few know anything about sports outside of North America. Moreover, the few who follow anything aside from the North American sports leagues are almost all fans of the English Premier (Soccer) League. To these students, cricket is an insect, and Formula One might be a hair coloring. Sports thus present an opportunity to introduce students to different business models and different cultures by discussing how sports are practiced in different countries.

Nippon Professional Baseball (NPB) and the Korea Baseball Organization (KBO) are good examples of how the Economics of Sports can broaden students' horizons. While the basic outline of baseball as played in Japan and Korea is very familiar to American eyes – indeed, KBO games briefly replaced Major League Baseball (MLB) on ESPN when the 2020 MLB season was delayed due to the coronavirus – significant differences become readily apparent when one looks more deeply. To start, the names of the teams differ from their American counterparts. For example, Japan's most popular – and historically most successful – team is known as the *Yomiuri* Giants, not the *Tokyo* Giants. That is because NPB and KBO teams are wholly owned subsidiaries of firms, the Giants being part of the Yomiuri media conglomerate.

Discussing NPB and KBO team names can lead to a broader discussion of how the organization of Japanese and Korean firms and business models differ from those in the US. Similarly, one can use the much greater emphasis that NPB and KBO place on the sacrifice bunt to point out how the US differs from Japan and Korea in how the individual relates to the group.

Extending students' cultural horizons can be fun and rewarding, but it also does not come without "sacrifice." Faculty who are not already familiar with foreign sports and cultures will have to spend some time and effort familiarizing themselves with them.⁵ In the case of Japanese baseball, one would have to become familiar with the work of Robert Whiting (1977, 1989, 2004) and Robert Fitts (2005, 2012).

Using Sports to Highlight Inclusion/Exclusion

Nowhere is the notion of sport as a metaphor more appropriate than in the exclusion and inclusion of groups of people. Learning about specific sports events or athletes can lead students and instructors to adopt more nuanced views of broad social issues. It can also explode a variety of comforting myths that we tell often ourselves.

To some degree, the course causes students to relearn history and debunk often-comforting myths. For example, students are often shocked to find that Jackie Robinson was not the first African American to play in a "major league" sport. Several African Americans played in the National Football League in the 1920s and early 1930s before being excluded during the Great Depression, and a few black players even played in what was then a rival major baseball league in the 1880s.

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⁵ My own interest in Japanese baseball comes from two years that my wife and I spent at Temple University's Japan Campus.

Similarly, students come to the class convinced that Jesse Owens humiliated Adolf Hitler and exploded the Nazi myth of Aryan superiority at the 1936 Berlin Olympics. Unfortunately, while Owens was among the greatest athletes of the 20th century, this story ignores several basic facts. First, Germany won far more gold medals (and more medals overall) than any other nation. Second, Owens earned his fourth gold medal when he and Ralph Metcalfe (also African American) replaced Marty Glickman and Sam Stoller in the 4x100 relay so as not to offend the Nazis by having the German relay team defeated by a team with Jews on it. Finally, our glossy image of Owens' performance ignores the discrimination that Owens experienced upon his return to the US.⁶

Talking about discrimination itself also becomes easier when done in the context of sports. My own attraction to the Economics of Sports began when I sought a non-confrontational way to teach about the Economics of Discrimination in an undergraduate Labor Economics class in the early 1990s. I wanted students to understand what Economics had to say about discrimination, but I also wanted to avoid having interpersonal arguments take the focus away from the course material. I found the solution in an article that had recently appeared in the *Journal of Labor Economics* that dealt with discrimination in the National Basketball Association (Kahn and Sherer, 1988). By keeping the focus on the NBA, I was able to address highly sensitive issues at arm's length, allowing the class to work together to understand the Economics of Discrimination without falling into internal bickering.

Sex discrimination also lends itself readily to discussion in an Economics of Sports class.

Topics can range from the benefits (and costs) of Title IX to the recent discrimination lawsuit

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⁶ Unlike their white teammates, the black Olympians were not invited to meet with President Roosevelt in the White House.

brought by the US National Women's Soccer team. The latter provides an excellent example of the difficulty of proving that sex discrimination has occurred.

One final topic, that of gender identity, has been for me, an eye-opening experience. It is ironic that much of women's sports rests on a doctrine of "separate but equal." Unlike advocates for racial equality, advocates for gender equality in sports generally seek to separate the sexes (the few exceptions, such as horse racing, themselves present an interesting lesson) as long as that separation does not lead to disparate treatment. That, in fact, is the entire point behind the application of Title IX to women's sports.

The separation into men's and women's sports has sometimes forced officials to rule on competitors' gender identity. Some cases such as the provision of male hormones to unwitting East German girls (see Ungerleider, 2001), are clear violations of the rules of competition. More recent cases, such as the recent ruling that Castor Semenya must undergo (sometimes dangerous) hormone therapy if she hopes to compete in future women's sprint competitions (Iveson, 2020), demonstrate the difficulty of imposing binary restrictions on a world in which some people's gender identity are located more on a continuum.

Conclusion

An Economics of Sports class offers many opportunities to the department, the students, and the instructor. A department can see significant increases in credit hours and, perhaps, majors. Students are often more motivated to learn material that, in a different context, they would consider boring. Faculty can enjoy a positive classroom atmosphere with highly engaged students.

The positive aspects of the course bring with them a unique set of challenges. Because an Economics of Sports course spans several of the traditional subfields of Economics, an instructor must be a jack-of-all-trades, capable of distilling theory from a variety of areas. The instructor must also deal with a larger diversity of interests, backgrounds, and abilities than exist in most upper level classes. This paper has presented several ways one can address these challenges.

None of the steps presented above, however, takes the place of careful preparation and attention to individual student needs. As with all classes, enthusiasm, diligence, and empathy are the best teaching techniques. With these in tow, teaching The Economics of Sports can be a rewarding and enjoyable experience for student and instructor alike.

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Table 1: A Sampling of Useful Web links

Title	Use	URL
Bull Durham: The Church	Entertainment	https://www.bing.com/videos/search?q=the+church+of+bas
of Baseball		eball+monologue&view=detail∣=EAF0B1F8D1A1155
		9986CEAF0B1F8D1A11559986C&FORM=VIRE
Green Fields of the Mind	Entertainment	https://www.bing.com/videos/search?q=green+fields+of+th
		e+mind+giamatti&view=detail∣=470132546142C2D8
		6780470132546142C2D86780&FORM=VIRE
George Carlin on Baseball	Entertainment	https://www.bing.com/videos/search?q=george+carlin+base
and Football		ball+vs+football&&view=detail∣=2501B7B2BFF03C8
		69C592501B7B2BFF03C869C59&&FORM=VRDGAR
Stephen Fry visits a	A Foreign Perspective on	https://www.youtube.com/watch?v=FuPeGPwGKe8
College Football Game	College Football	
University of Texas	How Schools Spend	https://www.youtube.com/watch?v=NVC3UziHeGk&t=42s
Football Locker Room	Money	
Last Week Tonight:	Public Funding of Sports	https://www.youtube.com/watch?v=FuPeGPwGKe8
Stadiums	Facilities	
Last Week Tonight: The	Bidding to Host the	https://www.youtube.com/watch?v=fmZA4BXG_Cw&t=2s
Olympics	Olympics	
Olympia – Festival of	The "Nazi" Olympics	https://www.youtube.com/watch?v=H3LOPhRq3Es
Nations	m	1
Bull Durham: Bar Fight	The Economics of Superstars	https://www.youtube.com/watch?v=7HP59H1YibI
I Was the Fastest Girl in	The Economics of	https://www.nytimes.com/2019/11/07/opinion/nike-
America until I Joined	Superstars	running-mary-cain.html
Nike		
The Football Game that	Discrimination	https://www.youtube.com/watch?v=CnOpZvEulvY
Broke Racial Barriers		

Table 2: A Sampling of Useful Data Sites

Title	Subject	URL
Sports-Reference.com	Meta-site for major team sports	https://www.sports-reference.com/
Spotrac.com	Useful payroll and contract data*	https://www.spotrac.com/
International Competitions Archive	Olympic and non-North American sports	http://www.todor66.com/
Sports Money: 2020 NFL Valuations	Market value, revenues and costs for NFL teams**	https://www.forbes.com/nfl-valuations/list/
Pitch f/x	Detailed game-by-game data for MLB games	http://www.brooksbaseball.net/pfxVB/pfx.php
Proballers	Data for the NBA and world leagues	https://www.proballers.com/
Transfermarkt	Data on major soccer leagues	https://www.transfermarkt.com/
NCAA Finances	Revenue and Expenses for College Athletic Departments	https://sports.usatoday.com/ncaa/finances/
Equity in Athletics Data Analysis	Costs and revenues for college sports from Dept. of	https://ope.ed.gov/athletics/#/
	Education	
Kenpom.com	Advanced analysis of college basketball	https://kenpom.com/

^{*}May require payment for premium content

^{**}Similar data are available for other major sports.