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Keywords

cartel, monopsony, intercollegiate athletics

Comments

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Revenue Shares and Monopsonistic Behavior in Intercollegiate Athletics

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September 2013

Abstract

Intercollegiate athletics in the United States operates as a monopsonistic cartel under the umbrella of the National Collegiate Athletics Association. This paper examines the degree to which it is able to exploit this position by restricting the level of compensation that goes directly to the athletes in the form of athletic scholarships. The major professional sports leagues in the United States (baseball, basketball, football, and hockey) all have negotiated aggregate salaries that represent over fifty percent of league-wide revenues. In comparison, analyzing data from The Office of Postsecondary Education (OPE) of the Department of Education on 2,068 institutions of higher education reveals that intercollegiate athletes receive payments-in-kind, via athletic scholarships, that constitute less than 22 percent of total athletic department revenues. Clearly the monopsonistic practices of the NCAA are effective in restricting the compensation of athletes.

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Introduction

Intercollegiate athletics is a multi-billion dollar industry in the United States. The college Football Bowl Championship Series (BCS) alone generated \$162.5 million in television revenue, while the men's NCAA basketball tournament, affectionately known as "March Madness", reported television revenues of \$771.4 million, for the 2010-2011 academic year.¹ The National Collegiate Athletic Association (NCAA), the organizing and governing body for college athletics, reported revenues of \$846 million in 2010-2011, sixty percent of which were transferred back to their member institutions.² According to data gathered by the United States Department of Education's Office of Postsecondary Education as part of its Equity in Athletics data gathering initiative, the combined athletic revenues across all Title IV colleges and universities in the United States were approximately \$12.6 billion, for the 2010-2011 academic year. In comparison the National Football League (NFL), the highest grossing professional sports league in the country had annual revenues of \$7.6 billion, for 2009. Clearly college athletics, as a whole, is on par if not more popular than individual professional sports leagues in the United States.

Despite the obvious popularity of college athletics and the huge revenues generated by the sales of tickets, television rights, and merchandise involved in college athletics, the NCAA and the universities involved have managed to operate college athletics as a tightly controlled and highly organized cartel. While sports leagues require a level of cooperation and coordination that is usually anathema to other competitive industries (see Symanski (2010) for a thorough analysis of exempting sports leagues from anti-trust legislation), due to the need to have other teams to play against and the perceived fan interest in team parity, the NCAA has also managed to restrain trade in the name of maintaining amateurism in college athletics.

The NCAA operates as a collusive monopsony in the labor market for athletic (player) talent. Under the guise of maintaining amateur athletics, the NCAA prevents its member institutions from paying its players for their athletic services. Institutions are permitted to award their student athletes scholarships but only up to an amount equal to tuition, fees, room, board, and a small stipend. This two-fold restriction on player remuneration – a cap on the amount of compensation, and a restriction on the form of remuneration to university scholarships– allows the NCAA to operate as the most effective monopsonistic cartel in all of athletics. By restricting player remuneration to tuition, fees, room, board and expenses in the name of maintaining amateur athletics, the NCAA is quite effectively controlling player costs to the universities in order to allow athletic revenue to be used for other purposes. The collusive monopsony of the NCAA allows universities to limit the flow of revenues that go to the players.

This paper will examine the degree to which the NCAA's cap on player remuneration in the form of scholarships limited to tuition, fee, room, board, and expenses effectively restricts the share of revenue returned directly to the players, in comparison to professional athletic leagues in the United States. Clearly, this is not even close to an apples-to-apples comparison in that the compensation of college athletes comes in the form of payment-in-kind scholarships which obviously can only be used for purchases of academic units. Not only are college athletes limited in using their compensation to purchasing educational credits from their own institution, they are required to maintain adequate levels of performance in these classes, as well. On the other hand, professional athletics are paid a direct salary to use as they see fit. Nonetheless, this analysis will examine the degree of monopsony control exerted by NCAA member institutions by comparing the share of revenue returned to college athletes in the form of scholarships relative to the share of revenue returned to professional athletes in the form of salary.

A common method of estimating the degree of monopsony control of an industry or employer is to compare the marginal revenue product of an athlete to his or her compensation. This exercise is fraught with difficulties and complexities under the best of circumstances, and clearly is untenable when considering millions of athletes across numerous sports. An alternative mechanism for establishing the degree of monopsony control in a sporting industry is to examine the share of revenue returned to the players. Economists have often used the share of revenue returned to the players in the form of salaries as evidence of the degree of monopsony control. For example, Scully (2004) concludes that “free agency in professional team sports has led to higher average player compensation, an increase in the share of league revenues going to players, and increased dispersion in player earnings.” The lower the level the monopsony influence in an industry, the higher the ratio of salaries to revenue, *ceteris paribus*.

This paper takes a similar approach by comparing the share of revenue generated from college athletics returned directly to the athletes in the form university scholarships relative to the share of revenue returned to professional athletes in the form of salaries in the “big four” sports leagues of the National Football League (NFL), National Basketball Association (NBA), National Hockey League (NHL), and Major League Baseball (MLB) in the United States. The next section of this paper outlines the major literature in monopsony and cartel behavior in sports, followed by a discussion of the data used in this analysis, and the calculation of salary shares for all of the leagues and the NCAA. The conclusion of this paper posits the possible policy implications of these results.

Literature Review

A thorough analysis of intercollegiate athletics and the NCAA as a rent extracting cartel is found in Kahn's (2007) survey of the literature. He notes that most studies of the NCAA model its behavior as a cartel that attempts to produce rents, both by limiting payments for inputs, such as player compensation, and by limiting output. Alternatively, the NCAA can be viewed as a voluntary organization that was established to ensure amateurism and competitive balance. The studies focusing on the monopsonistic practices of intercollegiate athletics primarily estimate the degree of anti-competitive practices of institutions by estimating the marginal revenue product of star athletes relative to their compensation via athletic scholarships. These studies find that a star collegiate men's basketball player has a marginal revenue product of over \$1.4M, in 2005 dollars, while a star football player adds \$495,000 to athletic revenues (Brown and Jewell (2004)). Similarly, an outstanding female collegiate basketball player adds \$263,000 to athletic revenue, in 2005 dollars (Brown and Jewel (2006)). Kahane (2012) estimates the marginal revenue product of a star collegiate hockey player as being between \$131,000 and \$165,000. Compensation in the form of scholarships, even at the most expensive institutions, is clearly well below the above estimated marginal revenue products, indicating a significant degree of monopsony control exercised by athletic departments over their athletes. Kahn concludes that "computations such as these offer evidence that the NCAA does indeed use its cartel power to pay top athletes less than their market value" (Kahn (2007), p. 212).

Examining player marginal revenue product and salaries in the NBA Scott, Long, and Somppi (1985) estimate the degree of monopsony power among professional basketball teams. They estimate player marginal revenue product separately for non-free agent players and free

agents. As expected, they find that non-free agents were paid a much smaller proportion of their marginal revenue product than were free agents, during the 1980-81 season. They conclude that restrictions on player mobility significantly reduce player salaries, and that the removal of these restrictions, in the form of free agency, results in player salaries comparable to their marginal revenue product.

Similarly, Gerald Scully (1989 and 2004) attributes the movement of major American sports leagues away from monopsony control of salaries to the implementation of veteran free-agency rules. Free-agency allows players to shop for higher salaries. Following the implementation of some form of free-agency rules in American hockey, football, and baseball average player salaries grew as much as 5.8 percent faster than league revenue growth, over an extended period of time. An arbitration ruling alleging collusion among baseball owners in 1987 also appears to have resulted in an escalation of player salaries in subsequent seasons (Scully 1989).

Andrew Zimbalist (2010) outlines the issues involved in accurately and consistently calculating salary shares across the four major professional sports leagues in the United States (baseball, basketball, hockey, and football). As briefly mentioned above, he discusses the complexities of defining both player salaries and team revenues. The primary focus of his paper is showing the importance of various assumptions and accounting details in the level of salary shares and the changes in the salary shares over time. His main conclusion is that a salary cap does not necessarily have an impact on the salary share of a professional sports league. That similar salary shares can be, and in fact are, achieved by leagues with and without salary caps.

His analysis of differences in salary shares across leagues and within leagues over time most closely matches the approach taken here.

Blair and Romano (1997) present a formal model of the NCAA as a collusive monopsony. They outline the market control exercised by NCAA institutions in limiting the remuneration of and quantity of athletes and coaches hired. They argue that despite the NCAA's argument under the antitrust rule of reason law, member institutions have not been able to clearly demonstrate that their monopsonistic and collusive practices designed to limit the number of athletes and coaches and their compensation have led to reasonable and beneficial outcomes for athletes, coaches, or consumers. Blair and Romano argue that the "smokescreen of good intentions" that the NCAA operates behind results in a loss in social welfare and "suffering" by athletes and assistant coaches.

Harrison and Harrison (2009) focus on the revenue generating sports of men's basketball and football. They examine legal challenges to the NCAA as a monopsonistic cartel. The crux of their discussion focuses on the NCAA's claim that they offer consumers amateur competition and that their leagues' amateur status is crucial and integral to the products that they promote. Harrison and Harrison point out that unfortunately the courts have so far agreed with the NCAA. In the 1984 Supreme Court case of the *NCAA v. the Board of Regents of the University of Oklahoma*, the court stated, "In order to preserve the character and quality of the 'product,' athletes must not be paid, must be required to attend class, and the like." There was no empirical basis for this judgment. Similarly, in *White v. NCAA* the plaintiffs argued that they were under-compensated because collusion among NCAA institutions led to a grant-in-aid (GIA) cap that was less than the actual cost of attendance (COA). In this case, unfortunately, a ruling was

avoided due to a settlement between the NCAA and the class action claimants. This direct challenge of the amount of compensation paid to athletes would have helped to illuminate the courts views on restrictions on player compensation had a ruling been made.

Sample and Data

All coeducational postsecondary institutions that participate in the federal student financial assistance programs and have an intercollegiate athletics program are required by section 485(g) of the Higher Education Act of 1965, as amended by The Equity in Athletics Disclosure Act of 1994, to submit an annual report to the Department of Education including data on athletic participation, staffing, revenues, and expenses by their men's and women's athletics teams. The Office of Postsecondary Education (OPE) of the Department of Education administers an annual survey to the eligible institutions in order to gather these data and to assure their consistency across institutions and survey years. The data set compiled by the OPE for the 2010-2011 academic year is utilized in this analysis. This data set contains information from 2,068 postsecondary institutions.

The primary variables of interest from this data set are the total revenues attributable to athletic activities, and the value of athletic scholarships distributed to athletes. For the purpose of this data set the OPE defines revenues attributable to intercollegiate athletic activities as “appearance guarantees and options, an athletic conference, tournament or bowl games, concessions, contributions from alumni and others, institutional support, program advertising and sales, radio and television, royalties, signage and other sponsorships, sport camps, state or other government support, student activity fees, ticket and luxury box sales, and any other revenues

attributable to intercollegiate athletic activities.” Most of these revenues and their origins are rather straightforward, with the exception of institutional support. In this regard the OPE, and in turn this analysis, treats the athletic undertakings of a university as the appropriate unit of analysis, and treats revenue support from the university as a revenue stream on par with ticket revenue. In fact, this treatment of the athletic department as the appropriate unit of analysis is consistent with the treatment of professional athletic teams that are wholly owned subsidiaries of other companies. For example, the New York Knicks in the NBA have a television deal with the Madison Square Garden Network (MSGN). Both the Knicks and the MSGN are owned by Cablevision. The revenue used in determining the share of revenue paid to players for the New York Knicks includes television revenue from MSGN, priced at a rate determined by a third party transaction.³

Additionally, the Gender Equity in Athletics data set defines student athletic scholarships as “any scholarship, grant, or other form of financial assistance, offered by an institution, the terms of which require the recipient to participate in a program of intercollegiate athletics at the institution. Other student aid, of which a student-athlete simply happens to be the recipient, is not athletically related student aid.”

Quite simply the ratio of student athletic scholarships to total intercollegiate athletic revenue, as defined above, is used in this analysis as the metric of the degree of monopsony control in intercollegiate athletics. This ratio represents an upper bound on the true costs to the universities of the scholarships offered to athletes, as virtually every higher education institution in the United States offers tuition discounts to a substantial portion of its student body. The foregone tuition revenue from athletic scholarships should actually be reduced by the expected amount of tuition discounting done at each institution if one is interested in estimating the costs

of athletic scholarships to universities. The ratio reported here represents an upper bound of the value of the scholarship to the athlete, rather than the cost of the scholarship to the institution.

The ratio of total player salaries to team revenue in each of the major professional sports leagues are used as benchmarks. Each of the professional sports leagues has their own subtleties and complexities in determining what should be included in player salaries (see Zimbalist (2010) for a thorough discussion of these issues). For example, at what point in the season or calendar year are team salaries determined? How does one account for multi-year contracts and deferred compensation in determining annual compensation? What player benefits are included in determining compensation? Similarly, there are ambiguities and judgments required in defining team revenues. These ambiguities include defining what constitutes sports related income when the owner of the team also owns the stadium or arena played in and/or the local television station that broadcast the games. For example, what proportion of the annual revenue from a corporate luxury box sold in an arena that hosts basketball, hockey, concerts, and the circus each year are attributable to the basketball team versus the hockey team?

These complicated details are carefully negotiated each year by the leagues and the respective player unions during collective bargaining. The details of these negotiations can result in millions of dollars accruing to either the players or the owners. For the purposes of this analysis the finer details of these negotiations do not significantly alter the general qualitative findings and conclusions of this paper.

Results

Revenue Shares by League

The salary shares of each of the major professional sports leagues in the United States are a closely scrutinized and well analyzed topic of research and discussion. This paper will not reinvent the wheel in this regard and simply reports and discusses these salary shares as already calculated elsewhere (see Table 1).

[Insert Table 1 here]

The league with the highest salary share is the NBA. Fifty-eight percent of team basketball related revenue is returned to the players in the form of salaries. Football (NFL) and hockey (NHL) report salary shares of 55 percent, followed by baseball (MLB) with a salary share of 54%. All of the major professional sports leagues in the United States have salary shares that are between fifty and sixty percent of revenue.

These salary shares hold relatively consistent over time within each of the leagues. Table 2 reports the range of salary shares within each of the leagues over time, with the exception of the NHL for whom reliable data are not available over time.

[Insert Table 2 here]

Clearly the more recent results reported in Table 1 fall within the range of salary shares from the past fifteen to twenty years, with the NFL falling near the lower bound of the past fifteen years, while the NBA and MLB salary shares lie closer to the middle of their reported salary shares of the past two decades. These figures are reported in order to provide a benchmark of the salary shares of professional sports leagues with more competitive labor

markets than that of intercollegiate athletics. The professional sports leagues each have their own monopsonistic characteristics and practices, such as drafting of players, restrictions on the movement of players across teams, and salary caps. On the other hand, each of the professional sports leagues in the United States has a players' union that enters into collective bargaining with the owners and acts as a body to advocate on behalf of the players.

Revenue Shares in Intercollegiate Athletics

The scholarship share found in intercollegiate athletics is substantially lower than the salary shares of the major professional sports leagues reported above (see Table 3).

[Insert Table 3 here]

From the academic years 2004 (2003-2004) to 2011 (2010-2011), the percent of athletic revenue earned by the institutions transferred to athletes in the form of athletic scholarships ranged from a low of approximately 21 percent to a high of just under 23 percent. Over this period, while athletic revenue increased by 82.9 percent, athletic scholarships increased by only 71.1 percent. Clearly, athletes at universities receive a much smaller share of revenues in the form of athletic scholarship aid than do professional athletes in the form of salaries, in the major United States sports leagues.

Turning to the most recent year for which data are available, and including all institutions in the OPE annual survey of Title IV receiving coeducational institutions with intercollegiate athletic programs, the percentage of athletic revenue transferred to students in the form of scholarships was only 21.49 percent, in the 2011 academic year (see Table 4).

[Insert Table 4 here]

Excluding smaller divisions such as the National Junior College Athletic Association and the National Christian College Athletic Association, and limiting the sample to just the NCAA Division I, II, and III institutions lowers the scholarship share to under 20 percent. The highest profile and most lucrative, in terms of revenue generating, NCAA institutions belong to the Football Bowl Subdivision (FBS). These 121 institutions have the highest profile football teams in the country and often have popular and successful men's basketball teams, as well. These athletic departments generate over \$6 billion in annual revenue, yet spend only \$938 million on scholarships. This translates to a scholarship share of only 15 percent. Clearly there are winners and losers among the athletes at these institutions in terms of the scholarships they receive relative to the revenue that they generate. For example, a member of the cross-country team on a full athletic scholarship almost certainly does not generate the revenue needed to pay for that scholarship. On the other hand, the star of the football team almost certainly generates revenue that is many times the value of his athletic scholarship. The net result is that players at FBS institutions on average receive a much lower share of the revenues that they generate than do their professional counterparts.

The Football Championship Subdivision (FCS) institutions have a scholarship share of approximately 28 percent. The other scholarship granting divisions of the NCAA (I-AAA and division II) have scholarship shares that are in the low to mid thirties. No major professional sports league in the United States has a salary share lower than 50 percent.

Clearly, the NCAA has effectively restricted the compensation of its athletes to a share of revenue that is dramatically lower than that found in the major professional sports leagues in the

United States, despite having annual revenue that is almost two times larger than the NFL, the highest revenue generating sports league in the United States.

Discussion

Clearly, student athletes are compensated in the form of athletic scholarships as a percent of revenue at a rate that is well below the compensation of professional athletes in the major U.S. professional sports leagues. Professional athletes in the ‘big four’ sports leagues of baseball, football, basketball, and hockey receives aggregate salaries that are over fifty percent of total revenues, in each of the leagues. Intercollegiate athletes receive aggregate scholarships that are less than 22 percent of total revenues. This lower level of payment-in-kind occurs despite the fact that intercollegiate athletics generates revenue that dwarfs any of the individual sports leagues in the United States.

Colleges and universities in the United States, through their collective organization in the NCAA, have been able to exercise tremendous monopsonistic control of the remuneration of their athletes. They have been able to exploit their monopsonistic cartel position under the guise of maintaining amateur athletics. The courts thus far have sided with the NCAA and allowed them to continue restricting the remuneration of athletes and assistant coaches. Professional athletes, on the other hand, have been able to improve their negotiating position over the years via unionization and collective bargaining. Intercollegiate athletes may also find unionization and collective bargaining an effective means of improving their position and increasing the share of revenues that flow to the athletes. Graduate student employees at public universities have

been afforded the right, in certain instances, to unionize, as they have been deemed to be at least in part employees, whose responsibilities extend beyond their role as students. One would expect that student-athletes could also effectively make the argument that the hyphen in student-athlete clearly indicates a separation of the independent roles and responsibilities of the student and the athlete.

Colleges and universities will continue to take advantage of their monopsonistic cartel and remunerate their athletes at levels, and in the form of compensation, that is significantly lower than the levels of compensation found in professional athletics, unless student-athletes are able to alter their position via the courts or through collective bargaining.

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Table 1

Salary Share in Professional Sports Leagues

<u>League</u>	<u>year</u>	Total <u>Player Salaries</u>	Total <u>Revenue</u>	<u>Salary Share</u>
NFL	2009	\$4,168,450,000	\$7,579,000,000	55%
MLB	2010	\$3,313,980,000	\$6,137,000,000	54%
NBA	2009-10	\$2,206,900,000	\$3,805,000,000	58%
NHL	2009-10	\$1,610,950,000	\$2,929,000,000	55%

Source: Nate Silver, "Calling foul on N.B.A.'s claims of financial distress." July 5, 2011. New York Times online.

Table 2

Professional Salary Shares Over Time

<u>League</u>	<u>Year</u>	<u>salary shares</u>
NFL	1994-2006	54.3%-65.0%
MLB	1990-2007	42%-67%
NBA	1995/96-2006/07	53%-65%

Source: Aggregated from tables in Andrew Zimbalist, "Reflections on Salary Shares and Salary Caps." *Journal of Sports Economics*, 11(1): 17-28.

Table 3**Scholarship Shares in Intercollegiate Athletics, All Institutions Over Time**

	<u>Total Student Aid</u>	<u>Total Revenue</u>	<u>Scholarship Share</u>	<u>No. of Inst.</u>
2004	\$1,583,426,224	\$6,892,245,236	22.97%	1976
2005	\$1,745,764,699	\$7,870,130,985	22.18%	1979
2006	\$1,870,078,438	\$8,915,186,107	20.98%	1976
2007	\$2,013,899,979	\$9,730,996,736	20.70%	1967
2008	\$2,183,922,866	\$10,536,539,870	20.73%	2035
2009	\$2,362,301,232	\$11,240,255,318	21.02%	2051
2010	\$2,530,535,109	\$11,804,188,871	21.44%	2055
2011	\$2,708,901,787	\$12,603,213,039	21.49%	2068

Table 4**2011 Scholarship Shares in Intercollegiate Athletics by Division**

NCAA classification	Total <u>Student Aid</u>	Total <u>Revenue</u>	Scholarship <u>Share</u>	No. of <u>Inst.</u>
All Institutions	\$2,708,901,787	\$12,603,213,039	21.49%	2068
NCAA divisions I thru III	\$2,248,341,934	\$11,367,547,957	19.78%	1045
FBS	\$938,231,576	\$6,255,441,069	15.00%	121
FCS	\$499,641,875	\$1,808,002,051	27.64%	124
Division I-AAA	\$367,514,665	\$1,190,301,257	30.88%	98
NCAA II-with football	\$253,830,682	\$749,871,711	33.85%	154
NCAA II without football	\$180,052,510	\$495,503,307	36.34%	134

Endnotes

¹ “It pays, even in basketball, to be in BCS.” Kristi Dosh, ESPN college football online. http://espn.go.com/blog/sec/tag/_/name/march-madness.

² National Collegiate Athletic Association and Subsidiaries 2010-2011 consolidated financial statements; pg. 4.

³ Andrew Zimbalist, “Reflections on Salary Shares and Salary Caps.” *Journal of Sports Economics*, 11(1): pg.19.