UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION

IN RE NCAA STUDENT-ATHLETE NAME AND LIKENESS LICENSING LITIGATION	Case No. C 09-01967 CW

EXPERT REPORT ON CLASS CERTIFICATION OF ROGER G. NOLL

My name is Roger G. Noll. I reside in Palo Alto, California. I am Professor *Emeritus* of Economics at Stanford University and a Senior Fellow at the Stanford Institute for Economic Policy Research, where I am Co-Director of the Program on Regulatory Policy. My educational background includes a B.S. in mathematics from the California Institute of Technology and a Ph.D. in economics from Harvard University. My complete curriculum vita is attached as Appendix A.

My primary area of scholarship is the field of industrial organization economics, which includes antitrust economics, the economics of specific industries, and the economics of technological change. I have taught the economics of antitrust and regulation at both the undergraduate and graduate levels. I am the author, co-author or editor of thirteen books, and the author or co-author of over 300 articles. Many of these publications deal with antitrust economics, the economics of sports, and the economics of the information sector of the economy, including broadcasting.

I have served as a consultant in litigation involving antitrust and/or intellectual property issues, including matters pertaining to sports. I have served as an economic expert for the players' association in all major U.S. team sports (baseball, basketball,

[redacted]

football, hockey and soccer) on the economic effects of restrictions on competition in markets for the playing services of professional athletes. In *Bernard Parrish, et al., vs. National Football League Players Association*, I testified on behalf of the players' association about the value of licensing rights for retired NFL players. I also have served as an economic expert on establishing a licensing value for performance rights of musical compositions and sound recordings.

I was involved in three prior cases involving the NCAA. In *College Football Association vs. NCAA*, after the judgment by the Supreme Court in favor of the plaintiffs, I was asked by the NCAA to analyze the competitive effects of a ruling by the district court barring the NCAA from participating in the market for broadcast rights for college football games, but this issue was resolved without my having to submit an expert report or to testify. In *Metropolitan Intercollegiate Basketball Association vs. NCAA*, I submitted two expert reports and testified at trial on behalf of plaintiffs regarding the economic effects of NCAA rules that eliminated competition between MIBA and the NCAA in attracting colleges to participate in basketball tournaments. In *Jason White, et al., vs. NCAA*, I prepared an expert report on behalf of plaintiffs and was deposed by the NCAA regarding the economic effects of the NCAA's rules limiting the value of athletic scholarships to less than the full cost of attendance.

During the past five years I have testified at trial in the following cases.

Bernard Parish, et al., vs. National Football League Players Association (U. S. District Court, San Francisco);

In re Application of MobiTV Related to U.S. vs. ASCAP (U.S. District Court, New York City);

Reggie White, et al., v. NFL: Lockout Insurance & Lockout Loans (U.S. District Court, Minneapolis);

SmithKlein Beecham d/b/a GlaxoSmithKline vs. Abbott Laboratories (U.S. District Court, Oakland);

Novell vs. Microsoft (U. S. District Court, Salt Lake City);

DVD CCA vs. Kaleidescape (Superior Court, San Jose); and

In the Matter of Adjustment of Rates and Terms for Pre-existing Subscription and Satellite Digital Audio Radio Service (Copyright Royalty Board, Washington, D. C.).

In addition to the cases in which I have testified at trial, I have submitted expert reports and/or been deposed in the following matters that are still pending or that have concluded within the last five years.

National Association of Optometrists and Opticians, et al., vs. Lockyer, et al., (U.S. District Court, Sacramento);

Joe Comes, et al., v. Microsoft (District Court for Polk County, Des Moines, Iowa);

In Re Dynamic Random Access Memory (DRAM) Antitrust Litigation (U. S. District Court, San Francisco);

Joel I. Roos and Tom Santos, et al., vs. Honeywell International (Superior Court, San Francisco);

Vincent Fagan and Anthony Gianasca v. Honeywell International (Superior Court for Middlesex County, Boston, Massachusetts);

John McKinnon v. Honeywell International (Superior Court for York County, Alfred, Maine);

Alfred T. Wright v. Honeywell International (Superior Court for Orange County, Chelsea, Vermont);

Eric Seiken vs. Pearle Vision (Superior Court for San Diego County, San Diego);

Jason White, et al., vs. National Collegiate Athletic Association (U. S. District Court, Los Angeles);

In Re Static Random Access Memory (SRAM) Antitrust Litigation (U. S. District Court, San Francisco);

Fair Isaac, et al., vs. Equifax, et al. (U. S. District Court, Minneapolis);

Apple iPod iTunes Anti-Trust Litigation (U. S. District Court, San Jose);

Minority Television Project vs. Federal Communications Commission (U. S. District Court, San Francisco);

In Re Flash Memory Antitrust Litigation (U. S. District Court, Oakland);

In re Applications of AT&T Mobility, Ericsson and Verizon Wireless Related to U.S. vs. ASCAP (U.S. District Court, New York City);

Sarah Perez, et al., vs. State Farm Mutual Automobile Insurance Co., et al. (U.S. District Court, San Jose; and

Federal Trade Commission vs. Cephalon (U.S. District Court, Philadelphia).

I also have been the co-author of the following *amicus* submissions during the past five years.

PSEG Fossil, et al., vs. Riverkeeper Inc. (U.S. Supreme Court);

American Needle vs. National Football League (U.S. Supreme Court); and

Petition to Reconsider Sports Blackout Rules (Federal Communications Commission).

ASSIGNMENT

Attorneys for the antitrust class plaintiffs have asked me to analyze the plaintiffs' allegations in this matter to determine whether the economic evidence and analysis that would be used to prove liability and to calculate damages in this matter involve the use of methods and evidence that are predominantly common to class members. In undertaking this task I have read the *Second Consolidated Amended Class Action Complaint* (henceforth *Complaint*). I also have read several depositions and numerous discovery documents. Finally, I have made use of information that has been collected from other public sources. In reviewing documents and analyzing the evidence I have been assisted by Daniel Rascher, Andrew Schwarz and other economists at OSKR. Appendix B contains a list of the materials that I have relied upon or that have been examined by others at OSKR under my direction. This report contains the results of my analysis. For carrying out this assignment, I am being compensated at the rate of $800 per hour.

This report has been written before discovery has been completed. Hence, I reserve the right to revise my analysis and amend my conclusions on the basis of new information that has not yet become available. In particular, I understand that my report is being submitted in connection with class certification and that I am not being asked to opine on the merits of the claims. I would like to have the benefits of the complete discovery record before reaching my conclusions on the merits.

SUMMARY AND CONCLUSIONS

The main conclusion of my analysis is that the allegations of the antitrust plaintiffs regarding antitrust liability and damages, if true, can be proved using evidence and analytic methods that are predominantly common to members of the alleged classes.

The alleged anticompetitive conduct in this case is the NCAA's imposition of rules that restrict both use of and payments for the images, likenesses and/or names of student-athletes after they cease being student-athletes. In brief, the plaintiffs allege that the NCAA forces student-athletes to grant colleges the rights to make commercial use of their images, likenesses and names after their careers as student-athletes are over and sets the fee for granting these rights at zero. I find that the evidence and methods of analysis that would be used to prove liability and to calculate damages would be predominantly common to class members.

The liability allegations involve members of the "injunctive class," which is all present and former student-athletes who participated in Division I NCAA men's basketball or Division IA football and whose images, likenesses and names *could be* licensed by the NCAA and its member institutions. Calculation of damages applies to the "damages class," a subset (or subclass) of the injunctive class that consists of former student-athletes whose images, likenesses and/or names *were* licensed or sold between July 21, 2005, and the present.

Liability

The objective of an antitrust economics analysis of liability is to determine whether conduct by defendants caused harm to the competitive process. In a rule-of-

reason antitrust case, this goal can be achieved by a "direct effects" analysis or the standard multi-step process that defines the relevant market, measures the market power of the defendants, determines whether anticompetitive conduct contributed to market power, and examines whether this conduct caused harm to competition. In both approaches, the last step is to inquire whether the anticompetitive conduct has a reasonable business justification in that the conduct allowed the defendant to achieve an efficiency objective that benefited consumers.

I have examined how both approaches to a liability analysis would be undertaken in this case, using the information that has been made available through discovery as well as public information. The goal is to determine whether the methods that an economist would use to prove liability are common to class members, in this case the injunctive class of present and former student-athletes whose images, likenesses and names were licensed during the class period but who were not compensated for that license. I conclude that all of the liability issues in this matter hinge on market performance, and not the circumstance of a member of the injunctive class, and hence that liability would be proved by methods that are predominantly common to all class members.

The relevant markets in this case – licenses for rights to student-athletes and the opportunity for higher education and elite athletic competition – involve identifying potential competitive substitutes and determining whether these potential substitutes constrain the ability of the NCAA and its member institutions to exercise market power. These questions inherently involve analysis at the market level, not the individual level.

Market power, which is the ability to maintain super-competitive prices or to exclude competitors, also is a market-level phenomenon. Proving the presence of market

power in this case involves showing that the NCAA has succeeded in causing the net price of college attendance for scholarship student-athletes to be higher than would be the case under competition and in causing the fees paid to student-athletes for licensing rights to be lower than would arise under competition. The NCAA's success in accomplishing both objectives is clear, and the methods to prove it are common to members of the injunctive class. These methods involve showing that highly skilled student-athletes have no competitive alternatives to the terms and conditions set forth by the NCAA in restricting payments to student-athletes.

The proof that the NCAA's market power arises from anticompetitive conduct involves an analysis of how the NCAA and its member institutions achieve their control over financial aid and product licensing. Here the answer is again obvious: the NCAA is a mechanism through which its members engage in effective price collusion that is backed by the penalty of severe punishment, even exclusion from intercollegiate athletics, of any college or student-athlete who breaks the rules that implement price collusion. Again, the evidence to prove that the NCAA's means of restricting scholarships and setting license fees for student-athletes equal to zero involves examination of the policies and practices of the NCAA and so is predominantly common to members of the injunctive class.

The NCAA's conduct causes harm to competition in four ways. First, it transfers wealth from student-athletes to the colleges that belong to the NCAA. Second, it causes an efficiency loss because, by raising the net price to student-athletes of attending college, it causes some students to decline scholarship offers or to leave school early due to financial pressures. Third, NCAA restrictions on payments to student-athletes have

caused a loss of choice among consumers in the availability of licensed products. The NCAA's inconsistent policies regarding which products can be sold by which licensee have eliminated products for which all parties, including the NCAA, agree are valuable to consumers. A prime example is video games that bear the names and likenesses of members of the team. Fourth, restrictions imposed by the NCAA on competition among colleges for student-athletes leads to inefficient substitution of expenditures to other elements of the budget for athletics that can be used to attract students. Examples are coaches, training facilities, and cheating on both the letter and the spirit of NCAA rules. All of these examples of harm to competition are market-level phenomenon, and proof of each involves information and analysis that is predominantly common to class members.

The NCAA has not yet submitted evidence in support of its asserted business justifications, so extensive analysis of these justifications is premature. The justifications are that restrictions on competition for student-athletes preserve amateurism, improve competitive balance in athletic competition, and prevent financial distress among colleges that field athletic teams. All of these issues involve information and analysis that pertains to colleges and consumers of sports. Competitive balance involves examining athletic success; competition among colleges both on the field and in recruitment of student-athletes is not balanced. The NCAA's definition of amateurism differs from definitions in other sports, nearly all of which have less restrictive rules than does the NCAA. Moreover, the NCAA's definition changes almost annually, without any apparent affect on the popularity of the sport. The argument about financial distress cannot be addressed without detailed financial information that has not yet been produced. But assessment of this argument is a matter that is common to all class members.

Damages

The procedure for calculating damages in this case is a top-down formula that starts with revenues to multi-college organizations during the class period and, based on information from licensing experience allocates this revenue between current and former student-athletes and then to individuals within the damages class. The starting place for this analysis is revenue from product licensing (including television rights) in Division IA football and Division I men's basketball. The revenue that has been produced is raised by consortia of colleges (conferences, the Bowl Championship Series, and the NCAA), and then distributed to colleges.

This revenue is further subdivided between fees derived from the rights to teams and games from the past versus the present. In some cases these licenses are entered into separately, but in many cases licensees simultaneously acquire both current and historical rights. Data from other licenses and from the generation of revenue from sports by channels is used to make this allocation, with the result being that the vast majority of revenue is derived from current teams and players.

This revenue also is divided between colleges and student-athletes. In the but-for world, student-athletes would enter into group licenses with their college to share licensing revenue. Theoretical and empirical evidence indicates that equal sharing is the likely result for television-related products, but a share of 2/3 to colleges and 1/3 to student-athletes is more appropriate for video games. Once this revenue is allocated to student-athletes, standard practice in group licensing is for this revenue to be divided equally among all members of the group at a particular college. This procedure does not

depend on any individual characteristics of a student-athlete other than whether the team on which they played had their images, likenesses and/or names licensed. Hence, this method is predominantly common to members of the damages class.

The remainder of this report explains the basis for the foregoing conclusions.

RELEVANT ALLEGATIONS AND CLASS DEFINITIONS

The starting place for analyzing whether the methods and evidence that an antitrust economist would use to prove liability and to calculate damages in this matter are predominantly common to members of the class of plaintiffs is the allegations in the *Complaint*. Plaintiffs allege that the NCAA and its member institutions, consisting of colleges and conferences, license numerous products that use the names, likenesses and/or images of student-athletes. Among these products are: television broadcasts; video and film recordings for sale as entire games, highlights or clips; video games; photographs, posters and action figures; and athletic wear (*Complaint*, pp. 7, 99-139). The allegations of the antitrust plaintiffs arise from the NCAA's rules that prohibit compensation of student-athletes for the use of their names, likenesses and/or images in these products (*Complaint*, pp. 8-9).

According to the *Complaint* (pp. 4, 10, 149-54) the NCAA and its member institutions engaged in collusion to fix prices (the compensation from licensing the images, likenesses and names of former student-athletes is set at zero) and a group boycott/refusal to deal (deny eligibility to participate in intercollegiate sports to any student-athletes who do not agree to give the right to license the use of their images, likenesses and names after their participation in intercollegiate athletics has ended).

Antitrust plaintiffs allege that as a result of this NCAA policy, they have suffered financial harm (*Complaint*, pp. 150, 151, 153, 154).

The *Complaint* (p. 76) defines the "Antitrust Declaratory and Injunctive Relief Class" (henceforth *injunctive class*) as all present and former student-athletes in the U.S. who have participated in Division I men's basketball or Division IA (now Football Bowl Subdivision, or FBS, of Division I) football whose images, likenesses and/or names may be or have been licensed or sold after the conclusion of their intercollegiate athletic career.[1] The *Complaint* (p. 76) also defines the "Antitrust Damages Class" (henceforth *damages class*) as all former student-athletes in the U.S. in the same sports whose images, likenesses and/or names have been licensed or sold from July 21, 2005, to the present. The relevant class for liability analysis is the injunctive class, which includes all members of the damages class plus two additional groups: former student-athletes in these sports whose images, likenesses and/or names have not but could have been licensed or sold, and all current student-athletes in these sports.

ANALYSIS OF LIABILITY ISSUES

The objective of an antitrust economics analysis of liability is to ascertain whether alleged anticompetitive conduct caused harm to competition. Usually horizontal collusion to fix prices is a *per se* antitrust violation; however, I understand that in this case the NCAA's conduct is being evaluated under a "rule of reason" standard.

The purpose of this section is to demonstrate that the methods and evidence that an economist would use to undertake a rule-of-reason analysis of the allegations in the

1. I understand that in Antitrust Plaintiffs' Motion for Class Cert., this definition includes schools in the predecessors to Division I that existed prior to changes in the 1970s.

complaint in this case are predominantly common to members of the injunctive class. Specifically, I examine here whether proof of liability under separate complaints by each class member that alleged the same anticompetitive conduct would require supporting economic analysis that was largely duplicative.

The traditional approach to an economic analysis of liability under the rule of reason involves a five-step analysis: (1) define a relevant market; (2) demonstrate that the defendants have market power in a relevant market; (3) show that the defendants' market power was achieved, enhanced or maintained by anticompetitive conduct; (4) establish that the acquisition of market power by anticompetitive means caused harm to competition; and (5) determine whether conduct that has an anticompetitive effect has a "reasonable business justification," which is an efficiency advantage that otherwise could not be reasonably obtained in another way.

In recent years economists and the federal antitrust agencies have emphasized a second economic approach to establishing liability in rule-of-reason cases, the so-called "direct effects" method. This approach focuses on direct evidence about the competitive effects of the alleged anticompetitive conduct. The principal reason for bothering to define a relevant market is that it leads to measures of market concentration, which in turn in some circumstances can be used to infer whether a defendant or group of defendants has market power – i.e., the power profitably to sustain prices above the competitive level and/or to exclude competitors from the market. Other tools besides market concentration also can be used to determine the presence of market power and the competitive effects of challenged conduct. "Some of the analytical tools… to assess competitive effects do not rely on market definition, although evaluation of competitive

alternatives available to customers is always necessary at some point in the analysis."[2]

As explained by J. Thomas Rosch of the Federal Trade Commission (FTC), "Direct effects evidence is evidence indicating the likely competitive effects of a transaction or practice that is not based on inferences drawn from market concentration alone."[3] Indeed, as Commissioner Rosch explains, direct effects evidence sometimes can be used to define the relevant market.[4] The main benefit of the direct effects approach is that it causes the focus of an economic analysis to be whether conduct by a defendant caused harm to competition. "A case focused on market definition risks getting bogged down in esoteric fights over critical loss analysis or the SSNIP test."[5] Although I believe that the direct effects approach is sufficient to evaluate the liability allegations in the *Complaint*, I describe the traditional approach and show that at each stage the evidence that would be used is predominantly common to members of the injunctive class.

Relevant Markets

The *Complaint* alleges two relevant markets. First is the "collegiate licensing market" (p. 90), which includes "rights to current and former players' images and likenesses" that are used in many products that are offered for sale, including live game telecasts, recordings (DVDs and on-demand streams) of telecasts and films of complete

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2. *Horizontal Merger Guidelines* (henceforth *Merger Guidelines*), U.S. Department of Justice and Federal Trade Commission, August 19, 2010, p. 7.

3. "J. Thomas Rosch, "The Past and Future of Direct Effects Evidence," Remarks before the ABA Section of Antitrust Law, March 30, 2011, p. 1.

4. "Another benefit of direct effects evidence is its potential to help define the relevant market. I have described this as 'backing into' the market definition." *Ibid.*, p. 2.

5. *Ibid.* A SSNIP test, which is discussed below, is based on a "small but significant non-transitory increase in price."

games or highlights, rebroadcasts of old games on scheduled channels, clips that are used in promotions, video games, photographs, and apparel. Second is the student-athlete college education market in which student-athletes "receive a college education and compete at an elite level of intercollegiate competition" (p. 92). In the context of the complaint, the student-athletes in question are limited to Division I men's basketball and Division IA (FBS) football players. The education market is relevant to the case even though it is not the market of the alleged competitive harm because the two markets are inextricably intertwined.

The alleged geographic component of these markets is the United States. The basis for defining the geographic market as the U.S. is that colleges and universities elsewhere in the world do not field football teams and either do not field men's basketball teams or, if they do, do not attempt to do so at a level of quality that is remotely comparable to Division I in the U.S.[6] As a result, there is no organization elsewhere in the world that corresponds to the NCAA, let alone that offers colleges an alternative to joining the NCAA to become part of a larger community of institutions to engage in on-field competition. Moreover, the high quality and enormous popularity of high-level intercollegiate athletics in U.S. colleges causes many elite foreign athletes who want to attend college while playing at the highest level of competition to attend U.S. institutions.

Because of the absence in the U.S. of licensed products combining the names and logos of foreign universities and the images, likenesses and/or names of their student-

6. In most of the world athletic competition at all levels, including competitions for youth and young adults, is organized by local athletics clubs and regional and national governing bodies in each sport that are completely separate from educational institutions. See, for example, "The European Model of Sports," European Commission Directorate-General X, 1999.

athletes, I expect that the scope of the geographic markets will not be controversial. Obviously foreign colleges cannot compete in the collegiate licensing market if they have no images, likenesses and names of student-athletes to offer in that market because they do not sponsor elite athletic teams. In any case the extent to which the NCAA and its member institutions compete with colleges and universities elsewhere in the world is not an issue that hinges on individual inquiries about each class member. Whether a foreign university fields high-quality football and men's basketball teams and is a competitive alternative for licensing products is an issue that is common to all class members. Hence, my analysis focuses on the relevant product markets that have been alleged by plaintiffs.

The remainder of the discussion of market definition begins with a description of the methods that economists use to identify products in a relevant market. I then apply these principles to the two alleged product markets. Because an understanding of the market in which student-athletes acquire education services is necessary to analyze the collegiate licensing market, I examine the student-athlete market[7] before proceeding to an analysis of the licensing market.

Principles

In antitrust economics market definition "is not an end in itself,"[8] but is a tool that is valuable only to the extent that it helps to shed light on whether the conduct at issue caused anticompetitive harm by either increasing market concentration or enabling a group of independent sellers to engage in effective collusion because collectively they

7. As discussed above, the education market is relevant to the case even though it is not the market of the alleged competitive harm because the two markets are inextricably intertwined.

8. *Merger Guidelines, op. cit.*, p. 7.

have a sufficiently high market share to exercise market power if they behave in a coordinated fashion. Here I proceed with an analysis of the relevant markets that are alleged in this case, although for reasons discussed in the subsection entitled "***Anticompetitive Effects***" the methods that an economist would use to determine the harm to competition arising from the alleged anticompetitive conduct do not require defining the relevant markets in which this conduct has taken place.

A relevant antitrust market is a group of products that, hypothetically, could profitably be monopolized under a common owner, but that would effectively compete if common ownership were anything short of complete monopolization of all products in the group. The starting place for defining a relevant market is a "reference product" – a product or set of products that is offered by the defendant. The reference product for the collegiate licensing market is licenses to use the images, likenesses and/or names of current and former student-athletes in products that also use the names and other identifiers of the colleges of the student-athletes. The reference product for the college education market is the sale by NCAA member colleges of educational services that are bundled with participation in men's Division I basketball and Division IA (FBS) football.

The process of market definition consists of identifying other products that collectively impose a competitive constraint on the price of the reference product. The concept that underpins market definition is economic substitution. A group of products are a close economic substitute for the reference product if a "small but significant non-transitory increase in price" (SSNIP) of the reference product would cause a sufficient amount of sales of the reference product to shift to sales of other products in the group to

make the price increase unprofitable.[9] A relevant market for purposes of antitrust economics is the reference product plus the smallest group of other products for which a SSNIP would be profitable if all products were sold by a "hypothetical monopolist" that sold all of the products. The "smallest market principle" implies that not all economic substitutes for the reference product necessarily must be included in the relevant market.

Although market definition is based solely on identifying products that are substitutes on the demand side of the market, the principle of substitution applies to both demand and supply responses to a change in relative prices. *Demand substitution* refers to actions by consumers to switch purchases among products. *Supply substitution* refers to the entry of new suppliers in the relevant market, either by shifting sales efforts from one geographic area to another or by changing product lines, that would increase the number of products that are substitutes on the demand side of the market.

In identifying a relevant product market, economists make use of several kinds of evidence. The normal starting place is to identify products that have similar descriptions and functions as the reference product, which is useful for identifying the set of products that are most likely to be close competitive substitutes for the reference product. In most circumstances competition arises among so-called "differentiated products," i.e., products with different qualities and technical characteristics. In this case both reference products are differentiated: the distinct identities of each college and its present and former athletes cause their licensed products to differ, and different colleges offer different combinations of academic and athletic opportunities.

In the end, whether products are in the same market is not simply a matter of

9. *Ibid.*, pp. 8-9.

functional definition and technical description, but whether customers regard the products as sufficiently close substitutes that a small change in the price of one product would cause them to switch their purchases to the other. The process of deciding which products actually are competitive substitutes is fact driven, and the evidence that is used depends on facts about the characteristics of the products and the nature of competitive interactions among participants in the market.

The core underlying facts that economists seek to uncover in defining a relevant market are the cross-elasticities of demand between the reference product and the products that are its plausible close substitutes.[10] If cross-elasticities of demand are high, an attempt by the producer of a product to increase price will cause a large loss of sales to other products, assuming that the prices of the other products remain unchanged.

In some cases econometric models can be used to estimate the cross-elasticities of demand between the reference product and the candidates for inclusion in the relevant market. The basic idea is to estimate the relationship between the price of the reference product and variables that capture the supply and demand conditions that determine its price, such as its technical features, its marginal cost of production, and the prices of its most plausible substitutes.[11] Unfortunately, an econometric analysis of price behavior

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10. The cross-elasticity of demand is the percentage change in sales of one product arising from a one percent change in the price of another product.

11. The seminal research in estimating cross-elasticities of demand for purposes of antitrust analysis is Jonathan B. Baker and Timothy F. Bresnahan, "The Gains from Merger or Collusion in Product Differentiated Industries," *Journal of Industrial Economics* Vol. 33, No. 4 (December 1985), pp. 427-44, which applies this method to the beer industry. The proposed merger between Staples and Office Depot is examined in Orley Ashenfelter, David Ashmore, Jonathan B. Baker, Suzanne Gleason and Daniel S. Hosken, "Empirical Methods in Merger Analysis: Econometric Analysis of Pricing in *FTC v. Staples*," *International Journal of the Economics of Business* Vol. 13, No. 2 (July 2006), pp. 265-79.

rarely is feasible because estimating cross-elasticities of demand between a reference product and several other plausible substitutes can be very difficult, and sometimes is impossible.[12] For example, the task of estimating cross-elasticities of demand is not possible if all firms in a market engage in price collusion. If all competitors set the same collusive price, there is no information on which to estimate the cross-elasticities of demand among competing products.

Due to the difficulty of estimating cross-elasticities of demand from econometric models, economists frequently employ other indicators of the degree of competition between two products to determine whether they are in the same markets. The *Merger Guidelines* list the kinds of evidence that bears on defining the relevant market.[13] This evidence includes documents from buyers, sellers and informed third parties that contain information about which products are commonly regarded as competitive substitutes, whether buyers shift or consider shifting purchases in response to changes in relative prices, whether sellers base business decisions on the prospect of buyers shifting purchases in response to relative price changes, the nature and extent of downstream competition in the buyers' output markets, and the costs of switching products.

One potentially useful indicator is the understanding of experienced observers of the industry. Here, the most useful evidence is the opinions of experienced individuals, preferably when expressed outside the context of the litigation, as to which products are

12. Unbiased estimation of cross-elasticities of demand in product-differentiated markets requires simultaneously estimating the demand and supply equations for all products that might be in the relevant market, which requires that each equation be "identified." While the precise conditions for identification are quite complicated, they approximately are that each separate equation – one for price and one for quantity for each product – must contain at least one unique explanatory variable. For markets with many products, this condition normally is impossible to satisfy.

13. *Merger Guidelines*, pp. 3-6.

close competitors of other products. The relevant evidence is not their opinions about market definition, for business executives and their customers are not likely to know the technical requirements for including or excluding a product from a relevant antitrust market. Instead, the kind of information that is useful is a supplier's or a buyer's sense of principal competitors and a buyer's sense of the reasonably close substitutes for a product. Here, the issue is how colleges identify potential student-athletes and which colleges a student-athlete seriously considers.

Another useful indicator is the presence of market power. Antitrust analysis separates market definition from market power; however, evidence that a firm has substantial market power is pertinent to market definition. If products from many independent suppliers are close substitutes, competition among them will drive prices to the competitive level. Hence, if products are broadly similar but the supplier of one product is able to sustain its price substantially above its average total cost of production and thereby to earn profits in excess of the competitive level, the highly profitable product must be sold in a relevant market that contains few competitive substitutes.

Application to the Higher Education Market

The purpose of this section is to explain why market definition in this litigation involves evidence that is predominantly common to all members of the injunctive class. The principal reason that market definition requires common evidence is that the very concept of a market is one that encompasses all buyers and sellers of the same product. If a single elite student-athlete were to file an antitrust complaint that contained the same allegations about anticompetitive conduct, that plaintiff would have to define the market

of colleges that compete in offering educational and athletic opportunities for student-athletes with the college in which the student enrolled. Every such individual complaint would need to show that the only colleges that are plausible competitive substitutes are NCAA members who compete in Division I men's basketball or Division IA football.

The transactions of interest in defining the college education market are the sale of the combination of college education and participation in elite college athletics to student-athletes who have sufficient academic and athletic abilities to be offered admission to college. This group includes student-athletes who are offered a scholarship and student-athletes who are "walk-ons" – that is, students who have positions on the team but who do not have an athletic scholarship. Both types of students are implicated by the allegations of anticompetitive conduct in the *Complaint* because the images, likenesses and names of both types are licensed or sold by the NCAA and its member institutions because walk-ons suit up for games, often play in games, and occasionally become starters.

From the perspective of colleges, there are no close substitutes for student-athletes who are capable of playing Division I men's basketball or Division IA football. Colleges that play in Division IA football or Division I men's basketball have decided to compete at the highest intercollegiate level in these sports. Colleges cannot be successful in this competition unless they enroll students who are sufficiently skilled in these sports to compete with other schools at the same quality level. A college may value enrolling students who are skilled in academic subjects or other sports as highly as they value skilled men's basketball and football players, but poets and tennis players are not substitutes for football or basketball players unless they are highly skilled at one of these

sports. Thus, the only close substitutes for the student-athletes a school recruits in men's basketball or football are other student-athletes with similar skills in the same sport.

Assessment of Competition among NCAA Divisions

From the perspective of a college, the closest plausible substitutes for Division IA football players or Division I basketball players are student-athletes who play basketball in Division II or football in Division IAA (Football Championship Subdivision, or FCS). These student-athletes are not substitutes for student-athletes in Division I men's basketball or Division IA football because the quality of players in these other divisions is lower. Likewise, from the perspective of student-athletes who play men's basketball in Division I or football in Division IA, the closest substitutes for the college that they have chosen are other colleges that offer both a comparable quality of higher education and the opportunity to play the same sport at a similar level of quality. While occasionally a lower division team defeats a team in Division IA football or Division I basketball, such upsets are exceedingly rare and are far outnumbered by one-sided games in which the team from the higher division annihilates the team from the lower division. Thus, a school that sought to avoid competition at its own level by focusing on players who are not sought by any other Division IA football or Division I basketball school would end up with a team at the quality level of a lower division, and so would not succeed in competing against colleges in its own division.

Colleges offer differentiated products in terms of both education and athletics. Even within Division I basketball and Division IA football, schools differ in their athletic prestige as derived from their historical athletic success, the success of the conference in

which they play, and the size of the school's fan base. In addition, they also differ in the scope and quality of educational opportunities that they offer, and the distance of each college from a student's home. In principle, these differences could segment the recruitment of student-athletes into several groups of colleges that compete among themselves but not across groups. Consequently, the relevant market could be smaller than all Division I schools for basketball and all Division IA schools for football in that student-athletes my not regard lesser schools as reasonable substitutes for more prestigious schools.

The principal method that economists use to determine whether products (here, colleges) are close substitutes is to examine the response of customers (here, student-athletes) to changes in the relative price of products. Obviously this approach is impossible in identifying the colleges that compete for student-athletes in the relevant market because the NCAA requires that all athletic scholarships pay for the same subset of the costs of attendance: tuition and fees, room and board, health care and required books, but notably not some other costs of attending college, such as a computer, transportation, other living costs, and the opportunity cost (forgone income) of not holding a job that pays more than $2,000 while attending college. Because of the absence of variance in scholarship offers among colleges, the standard approach for the close competitors among all colleges for student-athletes is not feasible.

The only price changes in the alleged relevant market are uniform across all colleges. The price of college for a student-athlete is the total cost of attending college minus the amount of scholarship that is offered to the student. The total cost of attending college has two components. The direct cost of attending college is the "cost of

attendance" that colleges calculate and publish in their catalogs (tuition and fees, room and board, books and supplies, travel between home and school, and other expenses directly related to attending college). The indirect costs of attending college are the opportunity cost of the forgone income from employment plus incremental living costs that arise from college attendance but that are not included in the cost of attendance that is calculated by universities. To a student, the price of college is the difference between the total cost of attending college minus financial aid. For most student-athletes, financial aid is limited to a scholarship that covers some but not all of the official cost of attendance of the college.

The rules regarding scholarships for student-athletes differ among the divisions within the NCAA. The members of the NCAA were divided into two divisions (major colleges and small colleges) in 1956, and in 1973 the three-division system was created. Division IA and IAA football were separated into two subdivisions of Division I in 1978.

Exhibit 1 shows the changes in the NCAA rules regarding athletic scholarships since 1967, starting before the creation of Division I. Exhibit 1A shows changes in the maximum amount of a scholarship, Exhibit 1B shows changes in the treatment of Pell grants, and Exhibit 1C shows changes in the number of scholarships that are permitted in Division I men's basketball and Division IA football.

In 1967, the allowable amount of an athletic scholarship ("grant-in-aid" based on athletic ability) was defined as follows.

> "Financial aid awarded by an institution to a student-athlete should conform to the rules and regulations of the awarding institution and that institution's conference (if the institution holds such affiliation), but in the event such aid exceeds commonly accepted educational expenses (tuition and fees, room and board, required course-related supplies and books, and not to exceed $15 per month for incidental

> expenses) for the undergraduate period of the recipient, it shall be considered to be "pay" for participation."[14]

By the start of the class period in 2005, the definition of the allowable amount for an athletic scholarship was as follows:

> "**15.1 MAXIMUM LIMIT ON FINANCIAL AID-INDIVIDUAL** A student-athlete shall not be eligible to participate in intercollegiate athletics if he or she receives financial aid that exceeds the value of the cost of attendance as defined in Bylaw 15.02.2. A student-athlete may receive institutional financial aid based on athletic ability up to the value of a full grant-in-aid, plus other financial aid unrelated to athletics ability up to the cost of attendance.
>
> * * *
>
> "**15.02.5 Full Grant-in-Aid.** A full grant-in-aid is financial aid that consists of tuition and fees, room and board, and required course-related books."[15]

Between 1970 and the beginning of the class period, numerous changes were made to the grant-in-aid cap. By the start of the class period the significant changes were that course-related supplies (including a computer if required) and incidental expenses (e.g., laundry) had been removed from the list but eligibility for additional financial aid that is not based on athletic ability up to the cost of attendance (including supplies, incidental expenses and transportation to and from school) had been added.

An especially important series of changes pertain to the Pell Grant program. Pell Grants are federal financial aid payments to low-income students to assist them in attending college. The standard for a Pell Grant is not just the cost of attendance, but takes into account other expenses that a low-income student may be required to cover in order to be able to afford college but that are not related to the cost of attendance.[16]

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14. *NCAA Manual, 1967*, Bates Nos. NCAAPROD00000001-53 at 10.

15. *NCAA Manual, 2004-05*, pp. 193-94.

16. "Cost of Attendance (Budget)," Chapter 2 in *Federal Student Aid Handbook*, February 3, 2011, U.S. Department of Education, pp. 3-35 to 3-37.

Examples are the costs of child care, a computer, an examination for a professional license associated with the field of study, and travel to participate in study abroad. As noted above, the NCAA originally did not distinguish between athletic scholarships and other types of financial aid, and so required that the total amount of all aid, including a Pell Grant, be less than the grant-in-aid cap. Beginning in 1984, the NCAA gradually relaxed the restrictions applying to Pell Grants until, since 2004, student-athletes have been allowed to receive a full grant-in-aid plus the full value of their Pell Grant.

The significance of these changes for market definition is that if the relevant market for elite student-athletes included entities other than the colleges that field teams in these divisions, changes in the limits on financial aid would cause switches between colleges that are subject to NCAA rules regarding the top athletic divisions and other entities that hypothetically would compete for the same students.[17] Because the best intercollegiate men's basketball and football teams have been NCAA members who operate under these rules throughout the period in which Division I has existed, the absence of rises and falls of institutions outside the NCAA in response to changes in the amount of financial aid that a student-athlete may receives demonstrates that the NCAA members of Division I do not face significant other competitors.

Another group of changes in the rules pertains to the limits on the total number of scholarships. In 1972, when freshmen were allowed to participate in varsity basketball and football, the NCAA introduced limits on the number of scholarships in each sport. The total number of scholarships was capped at 105 in Division IA football and 18 in

17. The most plausible candidates to become more effective competitors to colleges in Division IA football and Division I men's basketball are colleges in Division IAA football and Division II basketball, but these institutions are also part of the NCAA and adhere to their own even more restrictive scholarship rules.

Division I men's basketball. These limits were reduced to 95 for football and 15 for basketball in 1978. Between 1991 and 1993 the maximum number of scholarships was cut to 85 in football and 13 in basketball.

In 2012 there are 124 Division IA football teams and 347 Division I men's basketball teams (with a few more in the process of entering these divisions), so that the changes in scholarship limits between 1972 and 1994 amount to over 2400 fewer potential football scholarships and over 1700 fewer potential men's basketball scholarships. At the time it was introduced, the 1991 change eliminated over 1000 potential football scholarships in Division IA and about 600 potential basketball scholarships in Division I, which would have been sufficient to field 12 Division IA football teams and over 40 Division I basketball teams.

The reduction in the number of scholarships in the top divisions in men's basketball and football did not lead to new college teams outside of the NCAA framework competing at the highest level of intercollegiate sports. Instead, in the six years after the new limits were adopted (between 1991 and 1997), nine schools entered Division IA and three schools exited, for a net change of six. The net gain in Division I men's basketball from 1991 to 1997 was 13. The new competition that did occur arose within the NCAA. These facts imply that the relevant market that includes colleges that play Division IA football and Division I men's basketball does not contain any schools outside these divisions.

In recent years data are available about scholarship offers and student enrollments from Rivals.com, which tracks scholarship offers and enrollment decisions by student-athletes who are offered a scholarship by a Division I school. The students also are rated

according to their athletic promise (rank by position and a five-step overall quality rating from zero to five stars, with virtually no athletes given one star). From these data one can determine the pattern of competition for students and the decisions by students who have received scholarship offers from more than one school.

Under my direction economists at OSKR compiled the recruiting data from Rivals.com for men's basketball and football for the years 2007-2011. Exhibit 2 shows the number of student-athletes at each quality level who were offered scholarships in each NCAA division and the pattern of acceptances of these offers for these years. Exhibit 2A covers men's basketball and Exhibit 2B covers football. This exhibit shows that among student-athletes who receive any number of stars almost all who are offered scholarships in Division I men's basketball or Division IA football attend an institution at the highest quality level. Relatively few students who are offered a scholarship at the highest level receive a scholarship offer from a school from a lower division. This result is to be expected since a college does not want to tie up its limited number of available scholarships with offers to athletes who are not likely to attend.

The quality disparity between the highest NCAA division and the others is stark. More than half of the student-athletes who accept Division IA football scholarships have ratings of three stars or more, whereas five percent of accepted Division IAA football scholarships went to players with a ranking of three stars or more. At the highest quality levels (four and five stars), almost all student-athletes receive offers from the highest NCAA division and virtually no student-athletes attend a lower division. Among the top three rating categories (three, four and five stars), virtually all of the students who accept a scholarship in a lower division are students who were not offered a scholarship in the

highest division.

Exhibit 2 also shows that there is limited direct competition between the top divisions and the lesser divisions. The last panel shows the number of scholar-athletes in each quality class that was recruited by colleges at both the highest level and the other levels. The latter includes Divisions IAA, II and III for football or Divisions II and III for basketball. (Division III does not offer athletic scholarships, but can offer need-based financial aid.) Of the 41,588 football players who were followed by Rivals.com, 3,423 (8.2 percent) were offered a scholarship in Division IA and also were recruited by schools in other divisions. For men's basketball, of the 9,866 players who were followed by Rivals.com, 117 (1.2 percent) were made offers in both Division I and another division. Of the 2,490 student-athletes who were offered but declined a Division IA football scholarship, 1,003 enrolled in a college in another division, but a greater number (1,487) did not accept any offer. Similarly, of the 330 students who turned down a Division I basketball scholarship, only 62 accepted an offer from a college in a lower division. Thus, students were more likely to decide not to play football or basketball in college than to turn down a school in the highest division for a school in a lesser division.

A final piece of evidence is the effect on recruitment when a college moves up from a lower division to the top division. For example, in 2012, four colleges became members of Division IA: Massachusetts, South Alabama, Texas State, and the University of Texas at San Antonio (UTSA). The list of commitments for 2009 shows that the number of players who were followed by Rivals.com and who committed to these schools was seven for Massachusetts, sixteen for South Alabama, four for Texas State, and none for UTSA. In 2012, the first year of FBS play for these schools, the

number of recruits who were tracked by Rivals.com and committed to these schools was 23 for Massachusetts, 24 for South Alabama, 25 for Texas State, and 21 for UTSA. Moreover, in 2012, 91 of the 92 players who committed to these schools had a rating of two stars or more. In 2009, only 22 players who were tracked by Rivals.com and who committed to these schools had a rating of two stars or more. These data show that when these schools upgraded their football program, the quality of players who were attracted to these schools improved dramatically.

The information about recruiting shows that almost all of the competition for athletes who are sufficiently skilled to be offered a scholarship for Division IA football or Division I basketball comes from schools in the same division. Whereas there are more ways to make use of this data to determine the competitive overlap between divisions, this evidence is common to all members of the injunctive class.

Competition within Top Divisions

The second issue in market definition is whether within the top divisions there is substantial competition across schools in different quality levels. The idea here is that differences in academic opportunities, historical traditions and other factors could cause schools in the top division in each sport to separate into groups in which competition is intense within the group but not intense between groups.

One reason that this form of more restricted competition may not be true is the NCAA's scholarship rules, which prevent schools from including an allowance for transportation costs in athletic scholarships. In calculating the cost of attendance, colleges include travel costs in their estimates of the cost of attendance, and need-based

financial aid for students who do not receive athletic scholarships is calculated to take into account travel costs. The effect of the latter is to allow students who are not on athletic scholarships to make decisions about which college to attend on the basis of the fit between the student and the institution, without regard to travel costs. By excluding travel costs from financial aid, the NCAA creates a substantial financial incentive for student-athletes to attend college near home. This incentive has the effect of making nearby colleges of lesser academic and/or athletic reputation more competitive with the more prestigious colleges.[18]

The method for testing the proposition that colleges in the top division divide into smaller groups of non-competing colleges can be tested by comparing the recruiting wins and losses of schools in the same geographic area but with different athletic and academic traditions. The baseline for these comparisons is a compilation of the students who accepted and declined athletic scholarships at every institution. From this compilation, one can compare the institutions according to the extent to which the schools with which they compete are overlapping or distinct.

Exhibit 3 compares basketball recruiting between two Division I universities: the University of Nebraska at Lincoln and Creighton University in Omaha. The driving distance between Lincoln and Omaha is about 54 miles. Nebraska, the state flagship public university, has an enrollment of over 50,000 students, scores of undergraduate

18. A survey for the NCAA found that over half of men's basketball and football players "strongly agreed" that proximity to home contributed to their choice of college. Proximity to home ranked third after athletics and academics. "The Student-Athlete: Recruitment, College Choice, and Predictors of Academic Success," February 14, 2012, at http://media.collegeboard.com/digitalServices /pdf/membership/regional-2012/Student-Athlete-Recruitment-Part-I.pdf, slide 13. (*last visited 8/29/12*) Unfortunately the survey contained no comparable data for students who had received other scholarships that included a transportation allowance.

majors, and graduate degree programs in virtually all disciplines and professions. Nebraska recently moved from the Big 12 to the Big Ten, both among the top-rated basketball conferences. Creighton is a small Catholic school with a total enrollment of about 7,000. Primarily an undergraduate teaching institution, Creighton offers about 50 undergraduate majors, doctoral programs in education and three medical fields, professional degrees in business, dentistry, law, nursing and medicine, and master's degrees in a few other areas. Creighton plays in the Missouri Valley Conference, a "mid-major" that is not as highly regarded as either the Big Ten or the Big 12. Thus, if recruiting competition is limited to institutions of similar size, academic opportunities and athletic traditions, these schools should exhibit different patterns of competition with other institutions for student-athletes.

The comparison between Creighton and Nebraska shows only one case in which both schools sought the same athlete (Nebraska won the competition). But the lists of wins and losses show that both schools recruit against colleges of all types from around the entire nation. Creighton has won recruiting battles against several colleges from the top basketball conferences, including California (then Pac 10, now Pac 12), Colorado (then Big 12, now Pac 12), Iowa (Big Ten), Iowa State (Big 12), Marquette (Big East), Miami (ACC), Northwestern (Big Ten), Oregon (then Pac 10, now Pac 12), Pittsburgh (now Big East, ACC in 2013), Providence (Big East) and Seton Hall (Big East). Nebraska has lost recruiting competitions to many schools that are not in a top conference. Creighton and Nebraska compete against many of the same schools. The highlighted colleges in Exhibit 3 are schools against which Creighton has competed successfully but Nebraska has lost a recruiting battle: Ball State, Central Florida,

Colorado, Houston, Iowa, Iowa State, Wisconsin-Milwaukee, Pittsburgh, Providence, Seton Hall and Utah. These data indicate that these schools compete with the same schools in terms of geography and quality.

Exhibit 4 compares football recruiting by the University of Alabama in Tuscaloosa and Troy University in Troy, Alabama. The two campuses are separated by about 153 miles. Alabama has an enrollment of over 30,000, and one of the most successful college football programs in the nation. Alabama plays in the Southeast Conference, which in recent years has been the most successful conference in college football. Troy's campus in Troy has an enrollment of about 9,000, although its total enrollment at all of its campuses around the state is nearly as large as Alabama's. Troy joined Division IA in 2002 and plays in the Sun Belt Conference.

Alabama is far more successful than Troy in recruiting top football players, but there still is a great deal of overlap in the schools with which they compete for players. During the past five years both schools have recruited the same athlete five times and all five chose Alabama. Nevertheless, Troy State has recruited many athletes that were sought by other major football powers. Exhibit 4 highlights thirty colleges which lost a recruiting battle to Troy State but won a recruiting battle with Alabama. Troy State has a higher success rate than Alabama in competing against Central Florida and Cincinnati. Again, these data show that both schools recruit nationally and against an overlapping list of schools, indicating that they are in the same market for selling educational and athletic opportunities to student-athletes who play football.

Of course, proof of market definition entails more than one comparison each for recruiting patterns in men's basketball and football. These examples simply illustrate

that the relevant evidence exists and the method for making use of it. As is apparent, these comparisons are common to all members of the injunctive class.

Another piece of evidence concerning the relevant market is the belief of NCAA officials. The business justifications that the NCAA offers for these rules are that it improves competitive balance and reduces costs for struggling programs in Division IA football and Division I basketball. The necessary factual premise for this justification is that, but for the NCAA's restrictions on financial aid, competition for athletes within these divisions would cause more student-athletes to enroll at the top schools and lesser schools to offer much larger financial inducements to recruit student-athletes. In either case, the argument hinges on each type of school imposing a competitive restraint on the other, causing both types to be in the same relevant market. Thus, the differentiation among colleges with respect to size, athletic tradition and academic environment does not stand in the way of competition among different types of schools.

Finally, the effect of the NCAA rules regarding athletic scholarships also proves that the sale of college education and athletic opportunities to elite student-athletes is a relevant product market. As documented in Exhibit 1 and discussed more completely elsewhere, the NCAA has made many changes to the limits on the amount of financial aid and the number of scholarships in Division I men's basketball and Division IA football. All of these changes have been binding constraints in that schools offer scholarships in number and value at the NCAA cap. In particular, when transportation and incidental expenses were removed as reimbursable components of the cost of attendance from the ceiling on NCAA scholarships, colleges reduced their grants to this level. Likewise, the continuing problem of violations of the NCAA rules limiting the

benefits that can be provided to student-athletes proves that the limit on the value of scholarships is a binding constraint on NCAA member schools.[19]

The cut in the value of an athletic scholarship amounts to an increase in the net price that a student-athlete pays to attend college. If the relevant market in which elite student-athletes obtain college enrollment were broader than Division I for men's basketball and Division IA for football, then NCAA member institutions would not have been able to improve their financial circumstances by agreeing to raise the net price to student-athletes of attending college. Defections of elite student-athletes would have reduced enrollment of elite athletes sufficiently to have made the price increase unprofitable. In fact, as is shown in the recruiting data, the overwhelming majority of elite athletes continue to accept athletic scholarships in these divisions despite the success of the NCAA in causing the net price of college to be above the competitive level.

In summary, the acquisition of college education and athletic opportunities by elite student-athletes in men's basketball and football can be proved by using market-level data. This evidence and the method of proof are common to members of the injunctive class.

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19. A survey of NFL players long before the class period in this case found that nearly a third had accepted benefits in excess of the NCAA limit while they were in college. See Allen L. Sack, "The Underground Economy of College Football," *Sociology of Sport Journal*, Vol. 8 (1991), pp. 1-15. A recent study undertakes an econometric examination of instances of violations of NCAA rules regarding benefits to athletes, finding a positive relationship between success on the field in the previous year and being found to have violated the rules in the current year. See Brad R. Humphreys and Jane E. Ruseski, "Monitoring Cartel Behavior and Stability: Evidence from NCAA Football," *Southern Economic Journal*, Vol. 75 (2009), pp. 720-35. One significant implication of this article is that the number of detected violations was sufficient to support an econometric estimate of a model to explain the circumstances that give rise to detecting a violation.

Application to Licensing

To tackle the problem of defining the relevant market in which collegiate licensing takes place requires some understanding of the details about how licensing transactions occur. For the injunctive class the products in the alleged relevant market include a variety of products that vary substantially in the way player images, likenesses and/or names are used.[20] Nevertheless, all of these licenses have the same characteristic: rights to use the intellectual property of a college are bundled with the rights to use the images, likenesses and/or names of its players. Moreover, regardless of whether the number of players involved in the licensed product – one, a few, or two entire teams – the key economic characteristics of creating and selling a bundle of rights and the effects on license transactions arising from the NCAA rules are the same.

The key to understanding the relevant market in which collegiate marketing takes place as well as the competitive effects of the NCAA rules about licensing is the way in which transactions for bundles of rights are structured and offered for sale. The next section deals with the salient economic characteristics of transactions for collegiate licenses that bundle college rights and player rights. This analysis is followed by a traditional analysis of the scope of the relevant market.

The Economics of Collegiate Licensing

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20. The NCAA Presidential Task Force on Commercial Activity in Intercollegiate Athletics listed the following ways that student-athletes are used commercially: live television, taped telecasts, highlights (including Internet, mobile, DVD, video), news, screen savers, photos (including posters, calendars, books), promotional materials (calendars, media guides, schedules), commercially sponsored promos and contests, public service announcements, advertising, premiums with purchased products, products (bobble-heads, jerseys), and video games. NCAAPROD00082623.

The alleged college licensing market includes many types of licenses by schools that field teams in Division IA football and Division I men's basketball. These licenses differ according to the bundle of rights that are sold and the products that are licensed.

One important distinction among types of licenses is the type of product that is licensed. Colleges and conferences license live television rights, but in the past decade they typically have retained future rights for use of the broadcast after the live event. Future rights can be licensed for rebroadcast, for constructing highlight from many games, and for use as clips in promotions. Colleges also license video games that replicate the live action on the field, allowing the use of likenesses and records of the athletes but not their names and photographic images. Finally, colleges license other consumer products, such as posters and apparel.

Because the types of products that use college identifiers and images, likenesses and/or names of student-athletes are diverse and largely not competitive substitutes, a type of license (defined in part by the type of product for which it will be used) is likely to be a submarket. The reason is that a licensee cannot substitute a license to produce team posters for a license to televise games if the price of the latter increases relative to the price of the former. Nevertheless, because the sellers of the rights are colleges or consortia of colleges, the underlying right that is being licensed is the same, so that all collegiate licensing can be analyzed within the same analytic framework.

In the case of video games, television broadcasts, highlights and clips, a license is required for the name and identifying marks of the college and the likenesses or images of the players. Because of the inherent nature of visualizations of games, these products always include both the participating colleges and the players on the teams. Most college

licensing revenue comes from products (notably, live telecasts and the products that are derived from these telecasts) that contain the likenesses of the players on both teams.

Colleges also license many other products that have different combinations of images, likeness and/or names of players along with the name and identifying marks of the college. For example, athletic wear may contain just the school name and/or logo. But if athletic wear uses college identifiers and the name and/or image of a player or a group of players, the license must combine college and player rights. The licenses at issue in this litigation pertain to products that include both identifiers of colleges and images, likenesses and/or names of players. In the case of rights to films and videos of broadcasts of college games, which are among the licenses at issue for the damages class, all products use college identifiers and images and names of athletes and so require a license for both types of rights.

Another important feature of licensing is the distinction between individual and group licenses. Both a college and an individual player may grant a license for a specific product that includes the name and/or other identifier of both. But multiple colleges and players also may grant group licenses. For example, most of the revenue that colleges derive from licensing comes from pooled license rights that are sold by consortia such as the NCAA (for the national championship tournament in men's college basketball and for the pre-season and post-season National Invitation Tournament), conferences (especially television rights to regular season games), or the Bowl Championship Series (BCS) consortium for the five most important post-season football bowls.

In the market for rights to the images, likenesses and names of players, group licenses for players refer to licenses that include the rights to a group that is larger than

half of the number of players on a team who are actually playing: three for basketball and six for football.[21] Group licenses are used for three types of licensed products.

The first category of products includes the image, likeness and/or name of a single player, but the license covers the use of several players. For these products an individual player who is not subject to NCAA rules typically is compensated on the basis of the sales of the products that include the player's image or name.

The second category consists of licenses for products that cover the images or names of several players, but not an entire team, such as a poster of a team's stars or the inclusion of all members of the NFL Hall of Fame in EA Sports' Madden NFL video game.[22] For products that use the images, likenesses and/or names of a group of players who are not restricted by NCAA rules, the conventional practice is for players in the group to be compensated equally.

The third category includes products that are based on a game between two teams, such as video games that are based on specific teams in a specific year and products that are derived from televised games. The common practice is for the group license to include the entire team and, for players who are not restricted by NCAA rules, for all team members to share equally in the players' share of licensing revenues. The products

21. The NCAA apparently has also made this distinction. See Bates No. NCAAPROD00204756.

22. The Madden NFL game is released annually and includes likenesses and names of the rosters of the NFL teams in the current year. Some versions of the game also allow past members of a team that have been elected to the Football Hall of Fame to enter the video game as players. The license that covers this feature is a group license that covers all retired NFL players who have been elected to the Hall of Fame, each of whom is paid a fee of $2000. See *Parish, et al.* (subsequently captioned *Adderley, et. al.*) v. *National Football League Players Assoc., et al.*¸ Case No. C 07-00943 WHA, U.S. District Court, Northern District of California, Exhibit KKK to the Declaration of Ryan Hilbert in Support of Plaintiffs' Opposition to Defendants' Motion for Summary Judgment, document bearing Bates No. EA000135 – 145.

that pertain to members of the damages class are in this third category.

For all three categories of products the amount that a licensee is willing to pay for a license (P) reflects the combined value of the college identifiers (V_c) and the images, likenesses and/or names of the players (V_p) in the product {$P = f(V_c, V_p)$}. For several reasons a transaction for a bundle of these rights (both college rights and player rights) into a single license is more efficient than a group of separate transactions for the rights to each component of the bundle.

First, a bundled sale enables the licensee to negotiate a single transaction for the bundle, rather than separate transactions for each component. A potential licensee is willing to pay more for "one stop shopping" in which all the rights that are necessary to produce the product are acquired as a bundle.

Second, the evaluation of the bundle to the licensee usually is not easily separable into values for each component because the value function may not be linear (that is, $P > V_c + V_p$). An extreme example is television broadcast rights, in which the right to either the college identifiers or the images of the student-athletes is valueless because, in order to televise a game, a broadcaster needs the rights to both team identifiers and player images. Another example is the discovery record concerning negotiations between EA and the NCAA over video games based on college sports in which EA explains that clear identification of the players through the use of their names and playing histories would substantially increase the value of the game to consumers.[23]

23. [redacted]

Third, the indivisibility of the values of the components creates the potential for a breakdown in negotiations because the owner of each component of the bundle may try to extract all or most of its value. Another problem arising from licensing each component separately is "double marginalization," which occurs when each complementary product is sold by a monopolist. In this case the sum of the profit-maximizing prices for all of the sellers exceeds the profit-maximizing price that would be charged if both products were sold as a bundle by a seller with a monopoly in each complementary product. That is, if a final product is made by combining two inputs, each of which is monopolized, all buyers and the two monopolists would be better off if the sellers merged to form one monopoly.

The most common solution to the problem of conveying rights for a bundled product is for the owners of these rights first to pool their rights and to agree on how to share the revenue from the sale of their bundled rights. By first settling on the division of revenue among contributors to the bundle, and then offering the bundle to licensees, the contributors to the bundle of rights minimize the costs of transacting these rights. Exhibit 5 illustrates this pattern of licensing activity for professional basketball. The Exhibit lists a variety of product licenses in which the National Basketball Association (NBA) and the NBA Players Association offer product licenses of the rights to both teams and players, in some cases including retired players, with agreements about how the royalties will be shared among teams, current players and former players.

The collegiate licenses at issue in this case, like the NBA licenses, contain two complementary rights: one is the intellectual property of colleges and the other involves the images, likenesses and/or names of players. Moreover, because bundling rights into a single license is efficient, especially when the license includes group rights to an entire

team, the relationship among the combination of rights in the bundle can be clarified conceptually as a vertical relationship: hypothetically, college rights and player rights can be acquired by an entity that licenses the bundle, and the bundle is then licensed to producers of licensed products. The reference product in the relevant product market is the component of the bundled license that conveys the rights to the images, likenesses and/or names of student-athletes to the colleges.

NCAA rules dictate how this vertical relationship is structured. The NCAA requires that colleges act as the licensor of the bundle of rights and that all student-athletes assign their licensing rights to their college without compensation. Colleges then can pool the sale of their rights to facilitate the acquisition of rights to contests between two teams or for rights to many colleges in order to assemble a line of related products. For example, broadcasters seek regularly scheduled, repeating programs, which require rights to a series of games over the entire season. These rights are most easily acquired from a consortium of colleges (a conference). Moreover, the creators of unique post-season events, like the NCAA and the BCS consortium, reach agreements with colleges and conferences to license bundles of rights associated with their events in return for paying a share of the revenue from these licenses to them. Originally the NCAA monopolized the sale of television rights to college football games, but since the 1984 decision in *Board of Regents v. NCAA*, colleges and conferences have competed in selling these rights.

One feature of the relationships that are derived from the NCAA rules is that the value of the player component of the bundle of rights is transferred from the owners of that component (student-athletes) to the owners of the other component (colleges). By

rule, student-athletes have no alternative opportunity to license their images, likenesses and/or names. Consequently, student-athletes cannot respond to a change in the relative price for their component of the bundle of rights by shifting the sale of their rights to someone else. Student-athletes must assign their rights to their colleges or not participate in the market at all. Because student-athletes lack the ability to switch among buyers of their rights in response to a change in price, the student-athletes' component of the bundle of rights is a distinct relevant product market.

An important implication of this economic analysis is that the extent of competition in the relevant market that includes collegiate licensing is irrelevant to assessing the competitive effects of the NCAA's restrictions. Suppose that the market for collegiate licensing includes bundles of team organizations (colleges and other entities, presumably including professional teams) and their players, and that the revenue from all other bundles divides licensing revenue between the team organization and the players, as is the case in the NBA licenses in Exhibit 5. Even if these bundles of rights are sold at the competitive price, NCAA rules uniquely assign all revenues to the team organization (colleges) and none to the players (student-athletes), thereby transferring what would have been the competitive return to the student-athletes to the colleges.

The requirement for this process to produce a benefit to the colleges is that colleges do not pay the competitive price for the player rights in assembling the bundle of licenses. In order for the NCAA rules effectively to cause this result, the member institutions must comprise the relevant market for student-athletes who seek to acquire educational services and the opportunity to participate in intercollegiate athletics at the highest level. Thus, the two market definitions are linked. Student-athletes have no

competitive substitutes in the licensing market because they have no competitive substitutes in the college education market.

The Extent of the Relevant Market

Notwithstanding that the extent to which the NCAA and its member institutions can cause anticompetitive harm and derive a financial benefit from the NCAA rules regarding licensing does not hinge on the scope of the relevant market that includes collegiate licensing, this section examines whether this market extends beyond the membership of the NCAA.

As a preliminary matter, regardless of the scope of the market in which a product license is sold, in the process of acquiring the bundle of rights that are combined in a product license there is no substitute for the rights to the images, likenesses and/or names of the players. That is, to make commercial use of the video recording of the 1966 NCAA national championship men's basketball game, a licensee must be able to acquire the rights to the intellectual property of the universities (Texas Western, now UTEP, and Kentucky) and all of the players from both teams (including named plaintiff David Lattin). After having acquired the rights to the colleges, they cannot substitute the images, likenesses and names of, say, the University of Texas players for the Texas Western squad in response to an increase in the price of the rights to the latter. Nor could a licensee realistically substitute images of all the players on both teams from a future time after they had ended their collegiate playing careers.

The only alternative available to the licensee is to substitute the rights to some other game, thereby substituting all of the components (including teams as well as the

players). In principle the 1995 game between UCLA and Arkansas could be substituted for the 1966 game between Texas Western and Kentucky, even though just the image and name of Ed O'Bannon cannot be substituted for the image and name of David Lattin. Hence, even though the transactions of interest in this litigation involves the acquisition of the player rights in the bundle, market definition turns on the extent of competition for the bundled license that combines college rights and player rights.

In most cases the sellers of collegiate licenses are either colleges or conferences. Consequently, the number of competitors in this market is sufficiently numerous that by the conventional standards that are used by economists, this market is reasonably competitive. Nevertheless, because collegiate licenses are differentiated products, many colleges can enjoy substantial market power in selling their licenses. Colleges with large numbers of students and alumni are likely to have a significant captive market for their licensed products that is not likely to be competed away by others.

The licenses at issue here have no incremental cost of production. Licensing the use of the name and uniform of a college and the likenesses of its players in a video game imposes no cost on the college other than the cost of negotiating the license. Likewise, agreeing to allow a television network to broadcast a game imposes essentially no incremental cost on the colleges that are playing the game. Indeed, as the potential market for archives of past games has grown due to growth in the number of television channels on cable and satellite television and in the number of households with high-speed Internet access, revenues from licenses for rebroadcasts, highlights and clips of old games have skyrocketed. Exhibit 6 shows the growth in the sale of these rights in recent years. This new revenue was unanticipated when archival games initially were televised,

and are not associated with any incremental cost arising from licensing their use.

If the market for collegiate licenses for games and television broadcasts were perfectly competitive, license fees would fall to the cost of negotiating the license – or perhaps even less if appearance on television or in a video game increased applications for enrollment at the university. Thus, the fact that licensing revenues are substantial is evidence that, despite the competitive structure of the licensing market, product differentiation among colleges and conferences is extensive. Thus, a reasonable conclusion is that in the collegiate licensing market each school and conference at the elite levels in men's basketball and football sells product licenses in a submarket of the larger market that includes collegiate licensing.

The extent of differentiation is even greater for the men's national championship basketball tournament and BCS games. As shown in Exhibit 7, both sets of games generate enormous revenue that is far in excess of their cost. These revenues indicate that post-season championship events in Division I men's basketball and Division IA football are not close competitive substitutes with licenses for even regular season games in the same sport, let alone events in other sports.

The evidence shows that the market in which collegiate licenses are sold is structurally competitive, but that nevertheless product differentiation in collegiate licensing is sufficiently extensive that competition among colleges and conferences and between the NCAA, its member institutions, and other entities that license sports products is far from perfect. This evidence deals with data about market transactions involving large bundles of rights to multiple games involving multiple colleges and a large number of student-athletes. None of this evidence is individualized to any specific

member of the injunctive class, but is common to all. If any member of the injunctive class, such as Mr. O'Bannon or Mr. Lattin, were to file a separate complaint, the same evidence would be used to demonstrate the scope of the market in which products have been sold – like the two NCAA championship games mentioned above – that made use of their images and names, along with the images and names of their teammates. Thus, the evidence that is necessary to prove the relevant market in which collegiate licensing transactions occur is predominantly common to members of the injunctive class.

Market Power

In antitrust economics market power is the ability to control price and to exclude competitors. In the context of the markets alleged in the *Complaint*, the exercise of specific market power at issue here involves the following. First is the ability of the NCAA and its member institutions to raise the net price of college attendance by elite student-athletes and to exclude other colleges that want to compete at the highest level of men's basketball and football. Second is the ability to reduce the price for licensing the images, likenesses and names of student-athletes who compete at the highest level in men's basketball and football and to exclude from the market any competitor who would like to acquire the rights to the images, likenesses and names of these student-athletes for the purpose of competing in the collegiate licensing market.

Economists demonstrate the presence of market power in several different ways. One method, which relies on market definition, is to show that a market is concentrated, i.e., that the defendants enjoy a sufficiently high share of sales in the market that they can expect to be able to exercise substantial market power. Another method, which does not

rely on market definition, is to show that prices substantially exceed both marginal and average costs. Finally, economists also rely on direct evidence from the market to show that a defendant exercises control over price and excludes competitors from the market.

Concentration

As mentioned in the preceding section, in the absence of NCAA rules the relevant markets that are alleged by the plaintiffs would exhibit sufficiently low concentration that they would be regarded as structurally competitive. As of 2012, 124 schools belong to Division IA (FBS) and 347 belong to Division I. Nearly all of these colleges belong to conferences, and conferences typically package the television rights of their members, but the number of conferences is sufficiently large to make this market structurally competitive.

The conclusion is quite different if one takes into account that all of these schools and conferences are limited in their participation in the two relevant markets by a common set of NCAA rules. All of the colleges and conferences that play intercollegiate sports at the highest level (Division IA football and Division I men's basketball included) have agreed to set a common net price for college attendance (the scholarship limit), which includes the prohibition against compensating athletes for the use of their images, likenesses and names both while they are students and after their enrollment has ended. Thus, the NCAA rules change the concentration of the relevant markets – for college education combined with elite athletic opportunity and for the rights to the images, likenesses and names of student-athletes – from highly competitive to completely monopolized.

Monopoly confers market power in the presence of barriers to entry. The barrier to entry in the market for the combination of a college education and the opportunity to play intercollegiate sports at the highest level is the requirement that all colleges must abide by the NCAA's rules in order to schedule games with the best college teams. Student-athletes have no possibility to switch to other suppliers of the combination of educational and athletic opportunities that is offered by Division I schools because no college can schedule games with high-quality opponents unless it is a member of the NCAA. Likewise, the requirement to be a member of the NCAA and adhere to its scholarship rules also is the barrier to entry in the market for the rights to license the images, likenesses and names of student-athletes because the latter cannot be sold in the market for collegiate licensing unless the student-athlete is a member of a Division IA football or Division I men's basketball team. Thus, the ability to restrict participation in college sports to colleges that adhere to the NCAA's rules is an insurmountable barrier to entry that gives the NCAA member institutions collective market power in both of the relevant product markets.

The use of concentration measures and evidence of barriers to entry is a standard method to establish the presence of market power. This evidence deals with the characteristics of the markets in which NCAA member institutions participate and so is common to members of the injunctive class.

Other Evidence

Other evidence that an economist would use to prove that the NCAA and its member institutions enjoy market power in both relevant markets is described in the

discussion of market definition. An indicator of market power in both relevant markets is the NCAA's success at restricting the number and value of scholarships among all colleges that belong to the NCAA. NCAA rules have been effective at increasing the net price of college attendance for all student-athletes. Experience after past changes in the scholarship limits show that these limits are binding constraints. More generally, student-athletes in Division I men's basketball and Division IA football generate revenues in excess of the costs of staging the athletic events in which they participate.

Direct evidence of the market power of the NCAA and its member institutions is its ability to cause the net price of college attendance to exceed the competitive level. In a competitive market, financial aid to student-athletes would be determined by the expected net contribution of the student-athlete to revenues, i.e., the student-athlete's marginal revenue product (MRP). Several economics research articles have addressed estimated the MRP of a student-athlete.[24] The most recent study[25] finds that the median MRP was about $44,000, which exceeds the average value of a scholarship,[26] and that the

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24. See Robert W. Brown, "An Estimate of the Rent Generated by a Premium College Football Player," *Economic Inquiry* Vol. 31 (1993), pp. 671-84; Robert W. Brown, "Measuring the Cartel Rents in the College Basketball Player Recruitment Market," *Applied Economics* Vol. 26 (1994), pp. 27-34; Robert W. Brown and R. Todd Jewell, "Measuring Marginal Revenue Product in College Athletics: Updated Estimates," in John Fizel and Rodney Fort, *Economics of College Sports* (2004), Praeger, pp. 153-162; Robert W. Brown, "Research Note: Estimates of College Football Player Rents," *Journal of Sports Economics* Vol. 12 (2011), pp. 200-12; and John Leonard and Joseph Prinzinger, "An Investigation into the Monopsonistic Market Structure of Division One NCAA Football and Its Effect on College Football Players," *Eastern Economic Journal*, Vol. 10 (1984), pp. 4557-67. For a review of some of this research see Lawrence M. Kahn, "Markets: Cartel Behavior and Amateurism in College Sports," *Journal of Economic Perspectives* Vol. 21 (2007), pp. 209-26.

25. Erin Lane, Juan Nagle and Janet S. Netz, "Alternative Approaches to Measuring MRP: Are All Men's College Basketball Players Exploited?" *Journal of Sports Economics* (forthcoming).

26. The value of a scholarship is not the true marginal cost of a student-athlete because it

mean MRP was over $91,000. For the best players, MRP exceeds $1,000,000. This evidence demonstrates that the NCAA limit on financial aid not only is a binding constraint on colleges but that it reflects the exercise of considerable market power.

The requirement that student-athletes assign the rights to their images, likenesses and names to the college without compensation is just one of the components of the NCAA scholarship limits. The revenues from collegiate licensing are one source of demand for student-athletes that would lead to higher compensation in a competitive market than the value of a scholarship.

The ability to exclude competitors from both relevant markets is demonstrated by the ability of the NCAA to punish colleges that violate its rules and to exclude from membership colleges that do not agree to adhere to the rules. Some colleges are not members of the NCAA and field athletic teams, notably the members of the National Association of Intercollegiate Athletics (NAIA). The NAIA does have more relaxed eligibility rules than the NCAA, but it does not field teams that are remotely competitive with the basketball and football programs in Division I. And, when the NCAA banned Southern Methodist University (SMU) from participation in NCAA football in 1987-88 due to the severity of its violations in providing excess payments to athletes, SMU had nowhere else to turn to play football.

The source of the NCAA's power to exclude colleges from participation at the highest levels of intercollegiate sports is derived from the fact that all of the colleges that

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includes tuition and fees, which are transfer prices within the college. At colleges that are below their enrollment ceilings, the marginal cost of education for a student-athlete is likely to be much less than tuition. For scholarly analysis of the true cost of an athletic scholarship, see Brian L. Goff, "Effects of University Athletics on the University: A Review and Extension of Empirical Assessment" *Journal of Sport Management* Vol. 14 (2000), pp. 85-104, and the references therein.

field high-quality teams are NCAA members and are prohibited from scheduling games with colleges that do not adhere to the NCAA's rules. A college has a powerful incentive to "cheat" against the rules prohibiting compensation of athletes because the financial rewards to success in intercollegiate athletics – participating in a BCS game or winning several games in the NCAA basketball tournament – are so large. But a college has an equally powerful incentive not to leave the NCAA, for membership is necessary to have the opportunity to cash in on participating in college sports at the highest level. The latter incentive to stay in the cartel (but to find ways to break the rules without being caught) gives stability to the NCAA's rules that restrict payments to student-athletes. The evidence described in this section to support the presence of market power in the relevant markets, as with concentration, deals with the characteristics of the markets and the incentives created by the NCAA rules, and so involves facts and methods that are common to members of the injunctive class.

Sources of Market Power

A seller can enjoy market power in a relevant market for either of two reasons. The first is superior efficiency and foresight, and the second is anticompetitive conduct.

A seller that makes a better product, produces a common product at a lower cost than others, or is the first to see an emerging market opportunity, may be able to enjoy considerable market power. Superior efficiency and foresight may keep others from the market (thereby excluding competitors) and in so doing may allow the seller to maintain prices and profits above the competitive levels for a substantial period of time. In antitrust economics market power that arises from superior efficiency and foresight is not

anticompetitive and so does not give rise to antitrust concerns.

The other pathway for obtaining, maintaining or extending market power is to engage in anticompetitive conduct. Conduct is anticompetitive if it causes an increase in market power but does not result from an improvement in efficiency – i.e., a reduction in the economic cost of production or an increase in the quality of a product.

As described in the previous section, NCAA member institutions exercise market power in the relevant markets by mutually agreeing to set limits on financial aid, both generally and with respect to the rights to license the images, likenesses and names of student-athletes. The source of market power in both relevant markets is price collusion among NCAA member schools that is implemented through NCAA scholarship rules and enforcement procedures.

Price collusion is anticompetitive conduct because it does not arise from or create superior efficiency and foresight. This fact must not be confused with the idea that the NCAA may have a "reasonable business justification" for restricting pay to athletes, but only to the extent that it is a necessary by-product of achieving an efficiency goal. These arguments are considered in a subsequent section. Here the concern is why the NCAA's rules are devices for engaging in effective collusion.

College athletic participation is an extremely attractive opportunity for college-age athletes, in part because it comes with a price reduction for a college education, in part because of the enjoyment from participation, in part because professional basketball and football have minimum age requirements that prevent nearly all high-school athletes from moving directly into a professional career, and in part because college athletics may lead to a lucrative professional career. As a result, for most students there is likely to be a

large gap between the net benefits of accepting an athletic scholarship and pursuing the next best alternative. This gap in net benefits creates an opportunity for monopolistic exploitation by colleges if they can agree to suppress competition for student-athletes.

Because athletic participation is attractive, colleges can collectively agree to raise the price of college attendance for these student-athletes without suffering sufficient defections from participation that the price increase is not financially attractive to colleges. All members of the injunctive class have revealed by their choices to attend college that they valued obtaining educational services and athletic opportunities in Division I schools sufficiently to accept the restrictions that the NCAA imposes on scholarships. But all customers who pay a monopoly price are in the same position. Collusive monopoly is profitable only if a sufficiently large number of people value a product by more than the monopoly price. The fact that such people exist does not provide a justification for engaging in collusion because the ability to collude is not the result of superior efficiency and foresight.

Once the anticompetitive nature of price collusion is recognized, the remaining task is to show that this conduct succeeds in enabling NCAA member institutions to exercise greater market power in the relevant markets. Thus, the discussion in the previous section also provides the evidence to support the conclusion that the sources of market power are the NCAA's rules that restrict competition for student-athletes.

Anticompetitive Effects

The next step in a rule of reason analysis is to demonstrate that anticompetitive conduct causes harm to competition. An analysis of the effects of the NCAA rules with

respect to scholarships and product licensing shows that the methods for establishing anticompetitive harm are common to members of the injunctive class.

Principles

One element of an analysis of anticompetitive effects follows directly from combining the analysis of market power and the analysis of sources of market power. The effect of exercising any incremental market power arising from anticompetitive conduct is anticompetitive harm. Thus, an anticompetitive effect that arises from NCAA rules is the increase in the net price that student-athletes must pay to attend college. The financial losses from a higher net price of education also are the damages arising from the NCAA's anticompetitive conduct. Calculation of the financial harm to current and former student-athletes is discussed in the section of this report on damages.

The other element of anticompetitive harm is the loss of efficiency that is caused by anticompetitive conduct.[27] Efficiency losses fall into three general categories: dead-weight loss, loss of choice and inefficient substitution.

Dead weight loss arises from a change in the quantity sold in a market arising from a departure of price from the competitive level due to the exercise of market power that arises from anticompetitive conduct. Thus, because the quantity of a good that is

27. A controversial issue among antitrust scholars is whether demonstration of an efficiency loss ought to be necessary to prove liability. According to the consumer welfare standard, demonstrating that anticompetitive conduct caused a transfer of income to the entity that engaged in anticompetitive conduct is sufficient to establish liability. According to the total welfare standard, if the gains of the winner exactly equal the losses to the loser the conduct is acceptable. According to this standard, one must show an efficiency loss as well as an income transfer. Here I follow the leading textbooks in antitrust economics by adopting the consumer welfare standard; however, I also examine the efficiency effects of the NCAA rules and so address the total welfare standard as well.

sold almost always declines if its price increases, the reduction in quantity is an additional anticompetitive effect beyond the financial loss to buyers arising from the price increase. That is, the financial loss to buyers is $(P_M - P_C)Q_M$, where P_M and P_C are the prices under monopoly (reflecting the effect of the conduct) and competition (reflecting the absence of the conduct), respectively, and Q_M is the quantity sold at the monopoly price. If the relationship between price and the quantity sold is linear, the standard formula for the dead-weight loss to buyers is $\frac{1}{2} (P_M - P_C)(Q_C - Q_M)$.[28] The evidence that is required to establish dead-weight loss is that the anticompetitive conduct led to a change in price and quantity. In virtually all cases the magnitude of the dead-weight loss cannot be recovered in damages because it depends on how much each buyer who was excluded from the market would have been willing to pay for the product, which rarely is measurable. But one can establish qualitatively that dead-weight loss occurs by showing that, indeed, anticompetitive conduct did lead to a change in quantity.

Loss of choice refers to the elimination of a product with a unique combination of characteristics from the market. Even if the total sales of all differentiated products are unchanged, the loss of a unique product can harm the buyers of that product by forcing them to switch away from a product that they prefer. For example, the incremental market power arising from anticompetitive conduct may be used to exclude a product from the market. If so, buyers who must switch from the excluded product to another product suffer harm because they derive less value from the latter. As with dead-weight loss, quantification of this harm usually is impossible because the value of a product to a buyer in excess of the price that was paid typically is not measurable. Qualitatively the

28. Total dead-weight loss differs if the marginal cost of supply (here, the cost to the college of an additional student-athlete) is not constant. I ignore this complexity here.

loss to buyers from a reduction in choice can be demonstrated by examples of products that were excluded from the market despite sufficient demand to make them commercially viable in the absence of the anticompetitive conduct.

Inefficient substitution arises when anticompetitive conduct causes an increase in expenditures on other products as a means to avoid the full effect of the exercise of market power. For example, if an "upstream" product is an input to producing a "downstream" product, monopolization of one input may cause producers of the downstream product to substitute more of another input for less of the monopolized input. In this case the increase in sales of the non-monopolized input is an inefficiency that was caused by the anticompetitive conduct.

Dead-weight Loss

The NCAA rules limiting the value of scholarships, including the rule prohibiting athletes to be paid part of the royalties derived from licensing the use of their images, likenesses and names, is effectively a means of fixing the price of college attendance. Thus, when the NCAA removed allowances for required supplies and incidental expenses from the cap on a grant-in-aid, the effect was to increase the net price of college for all student-athletes. Theoretically, an increase in price should reduce the quantity sold. In college sports, the relevant quantity is the number of students holding an athletic scholarship, and the change in quantity can arise either because a student does not accept an initial scholarship offer or withdraws from college early.

Because the NCAA limits the number of athletic scholarships, a price increase does not reduce the number of scholarships awarded, but instead the expected effect is to

change the identities of the students who accept an athletic scholarship. Thus, from a theoretical perspective, the NCAA rules simultaneously caused dead-weight loss for students who decided not to accept a scholarship for Division IA football or Division I basketball because of the price increase and an inefficient substitution because students of lesser athletic ability substituted for students of greater athletic ability.[29]

A student may decline an athletic scholarship for many reasons, but among these are financial pressures. Students from low-income families may not have the financial resources to pay the costs of attending college that are not covered by financial aid, or may be obligated to seek employment to help support their families. Economists at OSKR under my direction have used Internet searches to identify students who are most likely to have rejected an academic scholarship for financial reasons.

The fate of students who did not accept scholarship offers are shown in Exhibit 8. Exhibit 8A disaggregates those who did not accept scholarship offers in Division I men's basketball and Exhibit 8B shows the same information for Division IA football. After accounting for other activities that may not be financially related, 1.8 percent of the basketball players and 5.9 percent of the football players have not played any sport as a professional or in college at any level, although their current activities are unknown. In addition, a few students are playing professionally, although not in the NBA or the NFL.

29. The gains of those who are added do not offset the losses of those who are excluded. The scholarship limit itself is an anticompetitive restriction because it is a horizontal agreement among colleges to reduce the number of student-athletes who are awarded scholarships below the number that otherwise would be granted (see the discussion elsewhere in this report about changes in scholarship limits between 1972 and 1993). The athletes who replace those who decline or abandon their scholarships are the ones who were next in line to receive a scholarship had no limit been applied. Hence, their gain in welfare when they are granted a scholarship eliminates part of the anticompetitive harm that they suffer, but this gain would not have occurred had they been awarded a scholarship and been team members in the absence of the scholarship limit.

Among the 105 players who were offered athletic scholarships to play Division I men's basketball or Division IA football and also were drafted by Major League Baseball (2007-2011), 38 decided to play minor league baseball rather than to attend college.[30]

The rejections of scholarship offers by quality ratings reveal the pattern that is expected if the primary motivation for rejecting a scholarship offer is financial. The four-star and five-star athletes are most likely to have a professional career, which gives them a stronger financial incentive to attend college. Among five-star recruits, very few (5) declined a scholarship offer and those who did either were ineligible (3) or became professional athletes (2). None of the eligible four-star and five-star recruits ended up in the unknown but not playing category. The athletes with zero or two stars are least likely to play professionally and hence most likely to forego an athletic scholarship for financial reasons. In fact 104 of the 119 "unknown" basketball players and 844 of the 997 "unknown" football players had ratings of zero or two stars (the two lowest categories).

Another plausible effect of the cap on financial aid is to cause early departures from college. Economists at OSKR under my direction have examined the information about early exits from college basketball. Whereas the age restriction for NFL players causes nearly all football players to be ineligible for an NFL job until after their third year in college, the NBA restriction allows college players to be eligible at the end of their freshman year.[31] Prior to the current age rule, many top players turned professional after high school, but these players now are forced to find some other way to occupy their time for an additional year. Exhibits 9A and 9B reports the results of an analysis of early

[30] Of the 67 who chose to attend college, only 32 chose to play college football or basketball.

31. The current restriction that a player must be 19 years old has been in effect since 2005, or the entire class period.

departures from college rosters in Division I men's basketball between 2008 and 2011.

Exhibit 9A shows the aggregate numbers for all early leavers and the specific fate of a sample of 100 players. The issue is somewhat clouded by the fact that players who left their original school in 2011 may be transferring to another Division I school. With some exceptions, transfer students who decide to abandon an athletic scholarship at a Division I school cannot play for another Division I school until after one full season has elapsed. The data show that roughly 27 percent of all scholarship holders in basketball leave college before their senior year, of which more than two-thirds do not show up later as transfers to another Division I school.

For a sample of 100 early leavers Internet searches cast further light on their fates. Of these 100 student-athletes, 71 stopped playing basketball entirely, six accepted an offer to play professionally abroad and three entered the NBA. These are the players who are most likely to have made their decisions for financial reasons.

Exhibit 9B examines the future careers of all of the players who have left college early to enter the NBA draft in 2008 through 2010. A player who is drafted or does not remove himself from consideration before the draft occurs becomes ineligible for future participation in NCAA basketball. For players who are drafted and make the team, the financial rewards are extremely high. But more than a third of the players who declared for the draft did not make an NBA roster during the following season. A total of 129 players declared for the draft in these three years, and of these 82 actually played in the NBA. Seven others made an NBA roster but did not play because they were either injured or assigned to the NBA Development League (NBADL), the minor league for NBA teams. These players would have been paid an NBA salary while on assignment.

Thus, 40 (31 percent) of the 129 players who declared for the draft did not reap the financial windfall that comes from making an NBA roster. Two of these 40 played for a professional team in Europe, where salaries are much lower than the NBA but potentially reasonably high.

Of the remaining 38 players, 10 did not make an NBA roster but played in the NBADL. Although the finances of the NBADL are not publicly available, the data that are available indicate that salaries in the NBADL are extremely low for players. For example, National Public Radio reports that in 2007 NBADL salaries ranged between $12,000 and $24,000, with one player who nearly made the NBA reporting that his NBADL pay was $15,000.[32] In 2011 ESPN reported that salaries were slightly higher, ranging from $13,000 to $25,000.[33] Thus, NBADL salaries are a financial improvement over an NCAA basketball scholarship, but not by so much that a more generous cap on financial aid would be insufficient to induce these players to remain in college.

Finally, 28 players who declared for the NBA draft either were never signed by an NBA team or were waived after being signed. These players effectively gave up organized basketball to declare for the draft, and so also plausibly would have stayed in college if the scholarship cap were higher.

The evidence indicates that a significant number of student-athletes either do not accept or ultimately abandon a scholarship in men's Division I basketball or Division IA football, and that the subsequent histories of these students support the theoretical

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32. Tom Goldman, "Almost-NBA Players Take Home Paltry Salaries," *NPR*, February 7, 2007, at http://www.npr.org/templates/story/story.php?storyId=7239948. *(last visited 8/29/12)*

33. Eamonn Brennan, "Is the D-League a Viable Alternative?" *ESPN*, May 6, 2011, at http://sports.espn.go.com/ncb/news/story?id=6490719. *(last visited 8/29/12)*

expectation that many of these students made these decisions for financial reasons. While only some members of the injunctive class are in this group, the evidence pertains to the overall market demand for the combination of educational and elite athletic opportunities, and is therefore common to all class members.

Loss of Choice

The NCAA's licensing rules and policies limit the number and quality of licensed products and in so doing eliminate options for student-athletes to license the rights to their images, likenesses and names. As a result, these practices cause anticompetitive harm to consumers by limiting the choices of licensed products that are available to them. The NCAA's stated goal is to prevent the reality or the appearance of the use of student-athletes to promote commercial products (promoting a product that is sold by colleges and the NCAA is permitted). The NCAA's rules and policies regarding precisely what can be licensed are complex and not entirely consistent. Rather than describe these rules and policies in detail, I highlight only a few examples of how the NCAA has sought to resolve conflicts that have arisen about whether a specific product is acceptable under these rules and policies or must be either excluded from the market or modified in a manner that reduces its quality because of these practices. These latter cases are examples of loss of choice to consumers.

The NCAA makes a conceptual distinction between the rights it can license and the rights that must be acquired from others (colleges, student-athletes, television broadcasters). "The NCAA (as the national office) does not license use of student-athlete jersey numbers and/or names and likenesses through its championship program.

However member institutions may approve of such usage on product bearing NCAA championship marks for retail sale at campus-owned outlets only."[34] The Thought Equity Motion (TEM) form agreement for licensing footage from old television broadcasts states that TEM "is not granting to Licensee the right to use the names or likenesses of a student-athlete… appearing in the footage in connection with or as an express or implied endorsement of any product or service."[35] David Knopp characterized the NCAA's policy as follows:

> "whenever it came to use of current or former student-athletes… in anything that would be deemed a commercial context, the NCAA had no ability to convey rights… So we would not only try to inform our corporate partners and their agencies, but oftentimes when something was submitted specifically to our office for approval by a corporate partner, we would reiterate, we can't speak to that. That is not something we have a right over. And you need to consult with your own legal counsel as to whether and how to go about securing any releases or clear instances of rights to those names or likenesses or images."[36]

The issue of how a potential licensee might acquire the rights to make commercial use of the images, likenesses and/or names of student-athletes is dealt with in standard form agreements in which student-athletes assign these rights to their colleges.

> "Consistent with NCAA bylaws, I acknowledge that XXX, its agents, and its authorized licensees may make copies of, use, sell, and distribute any photographic images of me which were taken in connection with my participation in the athletic programs of, or otherwise in connection with my status as a student, at XXX" (where XXX is the name of the college).[37]

In short, the rights to exploit images of student-athletes during the period that they are

34. Bates No. NCAAPROD00246347.

35. Bates No. NCAAPROD00085009.

36. Deposition of David Knopp, pp. 150-51.

37. Bates No. NCAAPROD00245548.

students, without limit of time, are assigned to the college, subject to limitations in NCAA rules and policies about how these images can be used.

Another document sheds some light on the meaning of the restriction on using images for commercial purposes. This document deals with the use of game footage by Coca-Cola and states:

> "the Coke mention/logo at the end of the spot you sent us is not permissible under our amateurism rules (which states that a student athlete cannot permit the use of his or her name or pictures to advertise, recommend or promote the sale or use of a commercial product or service of any kind). The only way for the spot to be permissible in its current form is to remove the Coke mention/tagging at the end or to use footage of student-athletes that have no eligibility remaining. On this basis, please stop airing this spot immediately."[38]

Notwithstanding the rejection of the Coke promotion, colleges and conferences apparently did license similar uses of the images of student-athletes. According to former NCAA Executive Director Myles Brand:

> "The presidents have been professing that they do not want/support commercialism most especially when student athletes' images are involved. Of course, the conferences and the schools are already doing that – for example, the Pontiac ads that they complain about are a staple in the fall football season, which they control."[39]

Another example is Baby Longhorn,

> "an educational video production aimed at toddlers and pre-schoolers using various UT images and references. For example, in going through the numbers 1-10 the number 10 uses a video clip of Vince Young in his uniform…"[40]

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38. Bates No. NCAAPROD00227853. In a similar vein, an e-mail message to EA states that the footage that is used in video games "must be at least five years old as current student-athletes cannot appear within a commercial product…" Bates No. NCAAPROD00219393.

39. Bates No. NCAAPROD00247417.

40. Bates No. NCAAPROD00232590.

Still another example was the use of a current student-athlete on the cover of a DVD that was sold by CBS in connection with its television license.[41]

The tension between the NCAA's prohibition of the commercial use of images of student-athletes and the actual practice is directly related to sales of licensed products, and hence licensing income for the NCAA. One document cites an anomaly in practices concerning the use of photographs.

> "Bylaw 12 regulations governing student-athlete likeness issues continue to have the potential to inhibit photo sales. As an example, Getty Images technically violates NCAA regulations every time it sells an action shot of a student-athlete with remaining eligibility to a magazine."[42]

But a member institution can license the sale of photos of current student-athletes to a third-party web site.[43] Different treatments of different ways to acquire photos limit choices available to consumers and are inefficient.

Another area in which anomalies in the NCAA's rules and policies cause limited choice is in the design of video games that are based on intercollegiate sports. The NCAA has decided that the use of the names and images of current student-athletes in video games violates its rules and policies regarding the commercial use of these rights.[44] Moreover, licensees must agree not to attempt to evade this restriction by dealing directly with current student-athletes.[45] These requirements cause the value of games to consumers (and hence the licensee) to be diminished. A series of internal NCAA e-mails

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41. Bates No. NCAAPROD00260901. Confusion over promotional uses of current student-athletes is expressed in another memo about television rights: Bates No. NCAAPROD00392418.

42. Bates No. NCAAPROD00139782.

43. Bates No. CLC0161923.

44. Deposition of Wallace Renfro, pp. 183-84, Bates Nos. NCAAPROD00102092-93.

45. Deposition of Greg Weitekamp, p. 30; Deposition of Pat Battle, pp. 197-98.

about EA's college basketball video games note that the use of player names on jerseys in basketball is so important that EA "will simply pull out of this category" if it is not allowed to use them.[46] Then-Executive Director Brand stated:

> "I seriously doubt that the presidents would agree to the use of student-athlete names and likenesses in commercial products, including video games… Do the presidents understand that by doing so they are leaving money on the table? Yes. Do they realize that there is already some of that taking place on their campuses and in their conferences? Probably no. Does this inconsistency matter to them? Apparently not."[47]

The consequence of this policy is that there is now no college basketball game on the market. EA and 2K both had college basketball products until 2008, when EA acquired an exclusive license from the NCAA that caused 2K to exit. But then EA cancelled its game in 2010 because NCAA rules "prevented it from being competitive in the marketplace,"[48] and 2K, did not re-enter.[49]

Inefficient Substitution

The NCAA's rules regarding scholarships and the use of the images, likenesses and names of student-athletes, including the prohibition against sharing licensing revenue

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46. Bates Nos. NCAAPROD00178242-50 at 43.

47. *Ibid.* at NCAAPROD00178243.

48. "Central to the debate in this case is a video game developed by EA Sports that uses animated players in college uniforms. Companies are not allowed to use 'real-life' imagery or likeness. Thus, all that was licensed in the EA Sports video college basketball games was the NCAA mark, not the student-athlete likeness. In fact, EA Sports discontinued the game because our rules prevented it from being competitive in the marketplace." In "The President's Report April 2010, An Update from Interim President Jim Isch" (NCAAPROD00203574).

49. In addition to video games, examples of other products that have been excluded or were of lower quality due to NCAA rules about the use of student-athlete images include fantasy sports (NCAAPROD00247582 , NCAAPROD00249529) and apparel and merchandise (CLC0158699-757).

with student-athletes, cause two types of inefficient substitution. The first consists of costly, imperfect ways to "work around" the NCAA's restrictions on licensing the use of the images and names of student-athletes. The second is increased expenditures on other inputs to intercollegiate athletics, including other facets of recruiting athletes.

EA is not permitted to use the names and likenesses of the student-athletes who are members of the teams that are included in its video games.

> "NCAA policy does not permit the usage of player names or likenesses in videogames. In accordance with the NCAA, EA is permitted to accurately recreate university rosters with uniform numbers, positions, heights, weights and the previous season's statistical information. While NCAA policy also permits the accurate recreation of skin tones, EA does not model faces or body types after student athletes. EA works closely throughout the development process with the NCAA and CLC and gains approvals for all aspects of its NCAA-licensed products before they are released."[50]

The method that EA uses to evade the NCAA's restrictions is to include a feature in its college football game whereby the names and playing histories of players can be imported into the game from third-party web sites. Because consumers prefer games that make use of information about the players, this feature has been popular among its customers. Nevertheless, this procedure still falls short of having actual images and names of the players embedded in the game. Moreover, it causes consumers to have to go to the trouble of importing material into the game. As a result the games are of lower quality and are somewhat more difficult to use than would be the case if the NCAA simply licensed the use of player images and names to EA.

Another consequence of the NCAA's restrictions on student-athletes is its effect on expenditures on other ways to attract athletes. As discussed elsewhere, the value of an

50. Bates No. NCAAPROD00198178.

elite student-athlete to a college substantially exceeds the cost of a scholarship. In the absence of restrictions on the amount of financial aid that colleges can pay, colleges would compete for student-athletes on the basis of financial offers. NCAA rules cap the amount of an athletic scholarship and limit the total number of scholarships, which causes financial aid for student-athletes to be converted to a fixed cost (the number of allowed scholarships times the cap on the amount of a scholarship) that is independent of the quality of the student-athlete. While this procedure controls the cost of scholarships, it does not control the cost of the other ways that colleges use to attract elite athletes.

An important mechanism for attracting high-quality athletes is the quality of the head coach.[51] The economic process by which restrictions on scholarships affect expenditures on coaches can be illustrated in the following model. The premise is that each college picks coaches and student-athletes to produce as strong a program as it can, given its revenue potential and budget. The implicit assumption is that differences in the long-run quality of athletic programs arises primarily through differences in the ability of a college to generate revenue for athletics, which then manifests itself in better coaches and better student-athletes.

For simplicity, assume that the college maximizes net revenues from a sport[52] and that these net revenues depend on the quality of the coaching staff, q_c, the average quality

51. Trent E. Gabert, Jeffrey L. Hale, and Gregory P. Montalvo, Jr., "Differences in College Choice Factors among Freshman Student-Athletes," *Journal of College Admissions* No. 164 (Summer-Fall 1999), pp. 20-29, finds that the head coach is the most important factor affecting college choice by student-athletes.

52. This assumption is consistent with statements by former NCAA President Myles Brand. "Let me put it provocatively. Athletics, like the rest of the university, seeks to maximize revenues. In this respect, it has an obligation to conduct its revenue-generating activities in a productive and sound business-like manner. Anything less would be incompetence at best and malfeasance at worst." Myles Brand, *State of the Association*, January 7, 2006.

of its players, q_p, and characteristics of the college, C, that cannot be altered, at least in the relevant period for selecting a coach. The latter include the size of the student body, the size and wealth of the alumni, and the market for college athletics. Assume also that the number of athletes to be recruited is N, the cost of coaching is wq_c (better coaches are paid more), and the cost of a scholarship is s. Finally, because student-athletes choose colleges on the basis of the quality of the coaching staff and the attributes of the college, assume that q_p depends on q_c and C.

Given these assumptions, the college's problem is to maximize equation (1).

(1) $$Z = R(q_c, q_pN, C) – wq_c – Ns,$$

where R is gross revenue from the sport.[53] In this equation, both s and N are predetermined by NCAA rule, so within the context of this simple model the only decision that the college makes is the quality of the coaching staff. Thus, if q_c is chosen to maximize Z, the following equation (first-order condition) must be satisfied.

(2) $$dR/dq_c + (dR/dq_p)(dq_p/dq_c)N = w.$$

Thus, the maximization problem provides a relationship between the wage cost of a unit of coaching quality and the productivity of both the coaches and the student-athletes that they recruit. If the revenue that can be derived from a given quality of student-athlete rises (that is, if (dR/dq_p) becomes larger), equation (2) no longer is satisfied by a coach of the same quality (the left-hand side of the equation becomes greater than w). Thus, an increase in the revenue productivity of players causes the college to seek a better coach because only an increase in coaching quality can bring equation (2) back to equality.

53. Some additional technical assumptions are required. The most important is that the effect of coaching quality and player quality on revenues (the marginal revenue products) both decline as more quality is added.

Finally, if the number of high-quality coaches is fixed, the effect of all colleges seeking better coaches will be to cause an increase w, meaning that the salary of coaches will rise.

The preceding analysis leads to a testable proposition. During the past two decades, the revenue generated by college sports, especially Division IA football and Division I men's basketball, has grown rapidly. One reason is that digital technology has created new ways to monetize college sports. Cable and satellite television systems now can deliver many more channels than they could two decades ago. The speed of high-speed Internet connections also has increased dramatically, causing delivery of video entertainment over the Internet to become feasible not only on personal computers but also on wireless devices such as smart phones and tablet computers. As seen in Exhibits 6 and 7, these developments have led to more than a doubling of the various forms of media rights from college football and men's basketball in the last decade.

The testable proposition is that this increased revenue productivity of student-athletes would cause coaching salaries to skyrocket. Indeed, that is the case. The most useful data to demonstrate this point are the detailed financial reports that colleges must produce to the NCAA, which contain annual expenditures on the coaching staff for each sport. These data were made available to me in the *Jason White, et al.*, case, but only partial and incomplete data have been produced here. In the absence of the best data, reliance must be placed on public sources.

Between 1985-86 and 2009-2010, the average salaries of football coaches at 44 universities among the top Division IA conferences rose from $273,300 to $2,054,700, expressed in 2009-10 dollars, while the average salaries of college presidents rose from $294,400 to $559,700 and the average salaries of full professors increased from $107,400

to $141,600.[54] No similar time comparison has been constructed for basketball coaches, but a similar trend is present there. *USA Today* has estimated that the total pay of both football and basketball coaches, and according to their estimates in 2011-12 the salaries of top 25 football coaches ranged from $2,275,545 to $5,193500, while the range for the top 25 basketball coaches was $1,521,370 to $4,987,578.[55] USA Today also reports substantial increases in the salaries of assistant coaches.[56]

A substantial part of the increase in coaches' salaries would not have occurred if the compensation of players would have been determined by competition among colleges for their services, just as the compensation of coaches is determined by competition. For example, if the scholarship payment, s, were a fraction of revenues, equation (1) would become the following.

(3) $$Z = R(q_c, q_pN, C) - wq_c - sR(q_c, q_pN, C)N.$$

Student-athletes would then make decisions among colleges on the basis of both coaching quality and their expectations about the revenues of the college. As a result, the demand for coaching quality and the salaries of coaches would fall. Thus, part of the rise in the salaries of coaches is an anticompetitive effect of the restrictions on scholarships.

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54. Charles T. Clotfelter, *Big Time Sports in American Universities*, Cambridge University Press, 2011, pp. 105-06, 239-40.

55. Erik Brady, Jody Upton and Steve Berkowitz, "College Football Coaches Salaries on the Rise," *USA Today*, November 17, 2011, at http://www.usatoday.com/sports/college /football /story/2011-11-17/cover-college-football-coaches-salaries-rise/51242232/1 *(last visited 8/29/12)*, and Christopher Schnaar and Kristin DeRemus, "USA Today College Basketball Coaches' Salaries, 2011-12," *USA Today*, March 28, 2012, at http://www.usatoday.com/sports/ college/mensbasketball/story/2012-03-28/ncaa-coaches-salary-database/53827374/1 *(last visited 8/29/12)*.

56. Erick Smith, "Assistant Football Coaches See Surge in Pay in Down Economy," *USA Today*, December 21, 2010, at http://www.usatoday.com/communities/ campusrivalry/post/2010/12/assistant-football-coaches-see-surge-in-pay-in-down-economy/1#.UDqtOqDsZTY *(last visited 8/29/12)*.

College officials bemoan the escalation in the salaries of coaches.

> "More than 85 percent of university presidents at Division I-A schools said compensation was 'excessive' for football and basketball coaches, according to a Knight Commission survey of 95 Division I-A university presidents. Most called escalating coaches' salaries the 'single largest contributing factor' to the unsustainable growth in athletic spending."[57]

University presidents have misdiagnosed the problem. The cause of the growth in spending, including escalating coaches' salaries, is growth in the demand for college sports combined with a competitive market for coaches. Eliminating competition for student-athletes transfers money to coaches that otherwise would go to student-athletes. As long as revenues from basketball and football continue to grow, rising salaries for coaches will absorb much of this growth, as has been the case for the last two decades.

The preceding reasoning also applies to any other mechanism other than the quality of the coach that is available to colleges to recruit athletes. One example is cheating on NCAA rules regarding the recruitment and retention of athletes, including rules pertaining to the academic standing of student-athletes as well as the money that is spent on them. As the revenues from elite sports grow, so does the incentive to cheat on those rules, at least in spirit. The college basketball coach who, according to *USA Today* was paid the most in 2011-12 (nearly $5 million), openly has pursued a strategy of recruiting so-called "one and done" basketball players who attend college for a single year with the expectation of withdrawing from school to enter the NBA draft.[58] While Coach Calipari is correct that his strategy is not a technical violation of NCAA rules, it

57. Michael Sanserino, "College Coaches' Salaries Continue to Soar," *Pittsburgh Post-Gazette*, March 29, 2012.

58. Steve Wieberg, "John Calipari Defends One-0and-Done Philosophy at Kentucky," *USA Today*, March 9, 2012, at http://www.usatoday.com/sports/college/mensbasketball/sec/story/2012-03-09/kentucky-calipari/53424952/1 *(last visited 8/29/12)*.

certainly strains the notion that college athletic teams are composed of student-athletes.

Another example of inefficient substitution that is induced by the cap on athletic scholarships is spending on athletic facilities. One factor in the competition for student-athletes is the quality of training facilities. The University of Southern California just opened the $70 million John McKay Center, a training facility named after its former football coach. According to current football coach Lane Kiffen, "It's a huge advantage… We were way behind our conference and (the) country. I think we not only caught up, but we probably passed everybody."[59] If student-athletes select a college partly on the basis of training facilities, the cap on financial aid will cause part of the monopoly gains from price collusion to be dissipated in excess spending on facilities.

Conclusion

NCAA rules have caused four distinct harms to competition. The first is exploitation of student-athletes by not sharing the financial bonanza from college athletics during the past two decades, including by keeping all revenues from licensing their images, likenesses and/or names. The second is the loss of student-athletes from participation in college athletics, as indicated by the data on rejection and abandonment of college scholarships. The third is the reduction in the quantity and quality of licensed products that are available to consumers. The fourth is inefficient substitution, both in licensed products to work around NCAA restrictions in the use of the images, likenesses and/or names of student-athletes and in other aspects of the process of recruiting athletes,

59. Michael Lev, "McKay Center Gives USC 'Huge' Recruiting Edge," Orange County Register, August 22, 2012, at http://www.ocregister.com/sports/usc-369193-center-mckay.html *(last visited 8/29/12).*

most notable the salaries of coaches. The evidence and methods that an economist would use to prove that these anticompetitive effects have occurred uses market-level data, and so is common to members of the injunctive class.

Business Justifications

In the past the NCAA has argued that its restrictive practices are justifiable because they are a reasonable means to obtain certain efficiency objectives. The alleged justifications put forth by the NCAA are: (1) the business model of college sports requires that athletes be amateurs; (2) restrictions on scholarships, including the restriction that neither current nor former student-athletes share in licensing revenue, is necessary to achieve balanced competition among teams in Division IA football and Division I men's basketball; and (3) restrictions on financial aid to student-athletes are necessary to maintain the financial solvency of college sports, including the full array of sports beyond football and men's college basketball.

The NCAA has not yet presented the economic evidence and analysis pertaining to business justifications, so it is premature to conclude that the restrictions at issue in this case are reasonably necessary to achieve valid business objectives. But in any case all of these justifications would be evaluated on the basis of evidence that is common to members of the injunctive class. Here I summarize the nature of this evidence.

Amateurism

In making the argument that the business model for college sports requires that students be amateurs, the NCAA does not clearly separate two concepts: participants in

intercollegiate sports are student-athletes, and participants in intercollegiate sports are amateurs. Proving that either of these characteristics is necessary for the business success of college sports requires evidence that the popularity of college sports actually depends on fielding a team of (1) *full-time students* who also are (2) *amateurs*.

To my knowledge the first issue is not in dispute, even though I am not aware of any evidence that it is true. The history of college sports prior to the codification of the first set of mandatory set of NCAA rules is replete with instances in which a college did not field a team of full-time students.

The NCAA uses a tautological definition of amateurism, which is that an amateur is a student-athlete who is not paid more than the financial aid limits set forth in NCAA rules. According to Bylaw 12.02.2, "Pay is the receipt of funds, awards or benefits not permitted by the governing legislation of the Association for participation in athletics." Like the Queen of Hearts, the NCAA defines the amount of pay that violates the principle of amateurism to be precisely what they say it is. Because the "governing legislation" changes frequently, the implication is that the definition of an amateur also varies from year to year. This approach to defining amateurism does not address the core issue, which is to identify the limits to paying student-athletes that are necessary for the college sports business model to succeed. In antitrust economics, that is the only conceivable definition that could reasonably be necessary to serve a valid business purpose.

History of Amateurism in College Sports

The historical development of college athletics sheds some light on the extent to which athletes must be both students and amateurs in order for intercollegiate sports to be

successful. To summarize, this history reveals that college sports became popular without rigorous rules about either student participation or amateurism, and that the evolution of the rules was primarily for the purpose of wresting control of college sports, including its revenues, from students.

From the 1870s to about 1900, sports were organized by students and financed by student organizations.[60] Campus athletics organizations formed the Intercollegiate Association of Amateur Athletes of America. Teams were run by captains, usually students, who also appointed a team manager, also usually a student, to handle day-to-day operations, including financial affairs. Financial assistance to players was paid by the team leadership from funds collected from student organizations and gate receipts.

Initially, the income to the teams was used to defray the costs of the sport and the team organization, but as revenues grew, payments to team members also grew and began to be more like employment relationships. In some cases, athletes played for valuable non-cash prizes.

For example, in the 1870s the winners of an intercollegiate rowing regatta on Lake Saratoga were given silver goblets worth $500 at a time when the average annual wage was $300.[61] In other cases, college students played for cash prizes, the first perhaps being future Harvard President Charles Eliot who, in the 1850s, along with his teammates, won $75 when Harvard won an intercollegiate rowing contest.[62] By the

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60. Ronald A. Smith, *Sports and Freedom: The Rise of Big Time College Athletics*, Oxford University Press, 1990, p. 119.

61. Ronald A. Smith, "The Historic Amateur-Professional Dilemma in American College Sport," *International Journal of the History of Sport*, Vol. 2, No. 3 (December 1985), p. 223.

62. *Ibid.*, p. 224.

1860s, prizes for winning regattas were as high as $500, and in 1874 Yale offered prizes of $12 to $25 for first-place winners in the intercollegiate track meet that it hosted. Yale recruited football player James Hogan by offering, among other things, a trip to Cuba and the concession for scorecards at Yale games.[63] Some "ringers" were not even regular students. In 1896 Lafayette College induced West Virginia star Fielding Yost to play one game against Pennsylvania, after which he returned to West Virginia.

Although financial control of sports by students had been controversial since the 1870s, very little was done to wrest control from students until the 1890s. Although professionalism among athletes was a concern to college administrators, their main concern was professional coaching. In 1883, Harvard organized a conference of eight colleges to adopt a common policy on intercollegiate athletics, and the group eventually adopted eight rules, among which were no professional coaches, no games against teams other than other colleges, a limit of four years for athletic eligibility, faculty governance through a campus athletics committee, and an agreement to play only colleges that abided by the same rules.[64] These proposed rules were then sent to 21 eastern colleges, but only Harvard and Princeton adopted them, so they were not put in place.

The Intercollegiate Conference of Faculty Representatives, selected from the faculties of seven midwestern universities that a year later became the Western Conference (the precursor to the Big 10), first issued regulations about payments to athletes in 1895. The 1895 meeting adopted the policy that an athlete who had accepted pay to participate in any athletic contest could not participate in college sports and that all

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63. Andrew Zimbalist, *Unpaid Professionals: Commercialism and Conflict in Big-Time College Sports*, Princeton University Press, 1999, p. 7.

64. Smith, 1990, *op. cit.*, pp. 136-7.

members of intercollegiate teams had to be students.[65] But these rules were not adopted at that time by even the universities that were represented at the conference. In 1898, Brown convened a conference to discuss outlawing professionalism in college baseball, but the proposed regulations that emanated from this conference also were never adopted by the participating colleges.[66] In 1899, the Columbia football team manager was caught paying the school expenses of five players and cooking the books to hide the payments, but despite strong responses from some faculty, nothing was done to alter the situation.[67] Thus, throughout the 1880s and 1890s, all attempts to establish common eligibility rules across colleges based on amateurism failed.[68]

When the NCAA was created, financial support for athletes was a secondary concern to the "mayhem on the field" that led to many serious injuries and death. Although the colleges that formed the NCAA adopted the principle that athletes should be both amateurs and students, there was no consensus about what this principle actually meant. As a result, the early years of the NCAA focused mainly on playing rules to reduce violence and injuries. The commercialization of intercollegiate sports, especially football, and professionalism among athletes were not materially affected by the NCAA in the ensuing thirty years.[69] Instead, a system evolved in which different colleges and

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65. Arthur A. Fleischer III, Brian L. Goff, and Robert D. Tollison, *The NCAA: A Study in Cartel Behavior*, University of Chicago, 1992, p. 38.

66. S. W. Pope, "Amateurism and American Sports Culture: The Invention of an Athletic Tradition in the United States, 1870-1900," *International Journal of the History of Sport*, Vol. 13, No. 3 (December 1996), p. 299.

67. Smith, 1990, *op. cit.*, p. 6.

68. Ronald A. Smith, "Harvard and Columbia and a Reconsideration of the 1905-06 Football Crisis," *Journal of Sports History* Vol. 8, No. 3 (Winter 1981), p. 6.

69. *Ibid.*, p. 15; George H. Hanford, "Controversies in College Sports," *The Annals of the American Academy of Political and Social Science*, No. 445 (September 1979), p. 69.

conferences defined amateurism differently.

In 1929, a Commission organized by the Carnegie Corporation issued a report on the state of intercollegiate athletics that was the culmination of a three-year study.[70] The report found that about 85 percent of the colleges surveyed paid athletes in one form or another. The report recommended that college presidents convert college sports to an amateur activity, eliminate professional coaches, and return the task of managing sports teams to students, with oversight by colleges. None of these recommendations were adopted, primarily because sports (especially football) had become so popular and financially successful that most colleges did not want to undertake a dramatic reorganization that would threaten college sports as a popular amusement and cause colleges once again to lose control. Thus, the Carnegie report was dismissed by college administrators as an anachronism.

Soon after the Carnegie report, the nation entered the Great Depression, which put significant financial pressures on colleges as well as just about everyone else. Whether motivated by the report or hard times, some conferences began to impose restrictions. In 1980, the NCAA collected historical information about financial aid policies between 1930 and 1958, and found the following information.[71]

The SEC prohibited athletic grants in 1933. Financial aid to athletes had to be awarded by the university's regular process for providing aid to all students. In 1936, the SEC changed its rules to permit athletics scholarships that covered tuition, fees, room,

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70. Howard E. Savage, *et al.*, *American College Athletics*, Bulletin No. 23, Carnegie Foundation for the Advancement of Teaching, 1929 as cited in Levinson, David and Karen Christensen. Berkshire Encyclopedia of Word Sport, Vol. I (2005), p. 45.

71. "Evolution of College Athletic Financial Aid Regulations: Conference Rules 1930-1950," NCAA, 1980.

board and books if the athlete met the same academic criteria that were applied to other scholarship students. In 1941, the rules were changed again to increase scholarships to include laundry and medical care; however, training table (separate meals for athletes) and aid from other sources were prohibited, earnings from outside employment were limited to $10 per month, and the duration of aid was limited to five years. In 1945, the SEC limited the total number of athletics scholarships in all sports to 75, and in 1946 the value of athletics scholarships was increased to allow $10 per month for incidental expenses. From 1948 through 1951, the SEC adopted the NCAA's "sanity code" (discussed subsequently), but returned to its previous rules when the sanity code was abandoned in 1951. Finally, in 1949 the SEC adopted a rule whereby a student who transferred from one SEC school to another would lose two years of athletic eligibility.

The Southwest Conference (SWC), now defunct but then a major power, prohibited athletics scholarships in 1930, although it allowed athletes to earn $0.50 per hour up to $50 per month for "manual labor." In 1932, the SWC amended its rules to allow athletes to be eligible for the same aid as other students, based on need and academic achievement. In 1938, the SWC permitted colleges to pay tuition and fees in excess of $30 per semester or $20 per quarter, with the proviso that students had to pay at least as much as was received in financial assistance. The student's share could be earned through employment. In 1941, the SWC expanded the "jobs rule" to specify that an athlete could earn room, board, fees and laundry through employment. A few years later (records are incomplete, but probably 1946 or 1947) the SWC permitted athletic scholarships to cover tuition and fees and adopted a new jobs rule that an athlete could receive room, board and laundry by working 160 hours per year (in an academic

calendar, about five hours per week). The 160-hour rule was dropped in 1948. These rules remained in place after 1948 as the SWC did not adopt the sanity rules.

The predecessor to the Big 10 was formed in 1895, but it did not succeed in beginning to control eligibility until 1906, when it passed rules requiring that athletes satisfy admissions requirements and banning participation by freshmen and graduate students.[72] In 1922, the conference, by then the Big 10, appointed a commissioner to enforce its eligibility rules. In the 1920s, the Big 10 prohibited both athlete recruitment and athletic scholarships, but allowed students to be employed by the department of athletics once they had arrived on campus. The Big 10 was known as a "simon-pure" conference because the Commissioner actually enforced its rules, as in 1929 when the conference cancelled the eligibility of most Iowa football players because they had been given loans by the athletics department, even though the loans were mostly short-term and had been repaid.[73]

The Big 10 rules were relaxed during the 1930s, and by 1941 the Big 10's policy was inconsistent: financial aid based on athletic ability was prohibited, but unearned financial aid was allowed if all athletic aid was equal or was based on non-athletic criteria, such as academic standing or need. Sometime between 1941 and 1949 (records are not complete, but probably 1946 or later) athletic scholarships formally were permitted, with two major limits. First, to receive a scholarship for tuition and fees a student had to demonstrate clear financial need and satisfy minimum academic requirements. Second, students could receive aid in excess of tuition and fees if they

72. From the Big 10 history at bigten.cstv.com/trads/big10-trads.html *(last visited 8/29/12)*.

73. James P. Quirk, *Minnesota Football: The Golden Years 1932-1941*, *Graphco*, 1984, p. 10.

exhibited superior academic scholarship (top one-fourth of high school class or, for transfers, a B average at another college). The Big 10 did not adopt the sanity code. In 1958, the financial aid rules were somewhat simplified: students could receive aid from employment, but unearned aid had to be based on academic standing and need, and was limited to tuition, fees, room, board and books.

The Ivy League had no league rules regarding financial aid until 1954, when it adopted the rule that schools would not award athletic scholarships but that athletes were eligible for the same aid as other students, based on need and academic achievement. In 1924, Harvard, Princeton and Yale entered into the "Big Three Agreement," whereby no financial aid was to be based on athletic ability. But, Yale, Harvard and Princeton were the only institutions with sufficient funds to provide need-based financial aid to all students. Athletic ability became a factor in deciding which students would receive scholarships at other Ivy League colleges.

For the first thirty years of its existence, the NCAA played no significant role in setting limits on athletics scholarships. The NCAA first attempted to regulate financial aid in 1939 when it adopted a "Declaration of Sound Principles and Practices for Intercollegiate Athletics." One principle was that aid had to be given through the same process as scholarships for other students, without special set-asides of the proportion of aid going to athletes. Another principle was that aid could not be based on athletic participation and could not be withdrawn for failure to participate. Another principle was that athletic department funds could not be used for any form of aid other than employment that involved full and honest effort. Although this form of financial aid rule

has never been required by the NCAA or practiced by most of its Division I members,[74] it remains the preferred policy of many schools, and periodically has been advocated by some Division I schools up to the present.

After World War II, the popularity of college sports boomed, and with it came renewed incentives for colleges to compete for student-athletes. As a result some colleges began to offer substantial financial inducements to attract top athletes.[75]

Relaxation of financial aid rules by colleges and conferences after World War II led the NCAA to attempt to tighten its rules. In 1948, the NCAA adopted the "sanity code," which stated that financial aid for tuition and fees should be on the basis of need, while aid based on scholarship and other non-athletic factors was unlimited as long as it was available to other students. The sanity code included the 1939 principles, and allowed medical care, training table, and meals on sanctioned trips. As reviewed in the discussion of the conferences, the sanity code failed because it was not widely adopted, and in 1951 it was formally repealed.

A year later, the NCAA embarked on a six-year reform by incremental change, ending in the first series of rules that approximate the limitations that are in place today. In 1952, the NCAA adopted a provision outlawing financial aid to athletes from anyone other than the college or the persons for whom the athlete is legally a dependent (normally, parents). In 1953, outside aid that was not based in any way on athletic ability was exempted from the 1952 rule. In 1956, the NCAA adopted rules prohibiting aid that

74. In the FCS (Division IAA), the Ivy League, the Patriot League in football, and the Pioneer Football League do not permit athletic scholarships. In Division IA, the service academies technically do not award athletic scholarships because all students are full-time employees of the military.

75. For a discussion of post-War payments to athletes, see Murray Sperber, *Onward to Victory: The Crises that Shaped College Sports*, Henry Holt and Company, 1998.

exceeds commonly accepted educational expenses. In addition, the NCAA prohibited aid based on performance and the withdrawal of aid due to injury or withdrawal from participation. In 1957, the NCAA adopted rules that limited athletic aid (including employment) to commonly accepted educational expenditures, which it defined as tuition, fees, books, room and board, and $15 per month for incidental expenses.

Only in the 1960s, did the NCAA begin to tighten its rules regarding employment. First, it set limits for earnings from employment by the university. Second, it prohibited athletes from using their "fame or reputation" to earn income (thereby for the first time prohibiting endorsements and paid appearances for non-athletic activities). Thus, the kinds of promotional activities that are at issue in this litigation finally became a part of the NCAA's definition of amateurism. Third, for the first time colleges were permitted to cancel scholarships if athletes became academically ineligible. Hence, the requirement that athletes be students also came into existence in the 1960s. Fourth, reimbursement for expenses associated with travel was limited to "actual and necessary" expenditures. Fifth, limits were placed on the number of complimentary tickets athletes were given to events. Sixth, special arrangements to provide benefits that were not available to non-athletes were prohibited. In addition, the NCAA explicitly permitted colleges to provide incidental benefits such as insurance and tutoring.

Elsewhere I have summarized the changes in the financial aid rules that have occurred since the 1960s. In evaluating the NCAA's current definition of an amateur student-athlete, the significance of this history is that the concept was invented *after*, not *before*, the business model for college sports became a success. Hence, the details of the current limitations on financial aid to students cannot possibly be the cause of the success

of college athletics.

Amateurs in Other Sports

The NCAA's definition of amateurism in litigation focuses exclusively on being a student, which is not controversial, and being paid no more in financial aid than the limits set forth in the NCAA rules. But the NCAA also has defined amateurism in terms of the motivation of student-athletes.

> "The Principle of Amateurism memorialized in the Association's Constitution declares that 'participation should be motivated primarily by education and by the physical, mental and social benefits to be derived…'"[76]

This broader principle is the one that has been adopted by other sports organizations that have continued to make a separation between amateur and professional sports. Exhibit 10 contains a list of all sports governing bodies for which I have been able to locate their definition of amateurism. As a general matter, the rules regarding amateurism have been getting more permissive for decades, and today several sports governing bodies no longer even recognize the distinction. Basketball and gymnastics are among the sports that no longer make a distinction between amateur and pro. The International Amateur Athletic Federation was once the international governing body for international amateur sports. But the organization changed its name to International Association of Athletics Federations, dropping amateur from its title, and now "controls" rather than prohibits advertising on an athletes' apparel.

One of the organizations that abandoned the distinction between amateur and

76. NCAA Task Force on Commercial Activity in Division I Intercollegiate Athletics, "Final Report," 2009, p. 4.

professional is the Olympics. The International Olympic Committee (IOC) originally was restricted to amateurs. In commenting about allowing professionals to compete, one IOC official was quoted as saying, "If we water down the rules now, the Games will be destroyed within eight years."[77] By the 1970s the definition of amateur had become quite elastic, if not hypocritical. The definition of amateur was left to governing bodies of each sport, and to ensure truly world-wide participation athletes from the Soviet bloc, who were essentially full-time employees of their nation's sports ministry, were allowed to compete. The IOC finally eliminated the word amateur from its charter in 1986, and a growing number of governing bodies of sports eliminated their amateur requirements.

In the 1992 Olympics one remaining major holdout, the International Federation of Basketball Associations (FIBA), let pros compete, leading to the creation of the U.S. "Dream Team," which many still regard as the greatest basketball team ever assembled. The success of the Dream Team and the rising popularity of Olympics that feature professional athletes illustrate that fans prefer high-quality play to amateur status. In recent decades two winter Olympics were held in the U.S: 1980 in Lake Placid (for amateurs) and 2002 in Salt Lake City (with professionals). Income from sponsorships and licensing has grown from $32 million in 1980 to $865 million in 2002.[78]

The natural place to begin a plausible definition of amateur is the Amateur Athletic Union (AAU), an organization that sponsors national amateur competitions in numerous sports and sets the eligibility criteria for these competitions. The AAU defines an amateur as someone who engages in sport as an avocation for pleasure and physical,

77. Quoted in Charles W. Thayer, "A Question of the Soul," *Sports Illustrated*, August 15, 1960.

78. International Olympic Committee, *Marketing Matters*, June 2002.

mental or social benefits, but it does not rule out all forms of compensation for athletes.[79] The AAU has two categories of members: youth (under age 21) and adult. Youth members "may not directly or indirectly receive pay or financial benefits in consideration of or as a reward for participating in athletic competition or exhibition beyond reasonable expenses, or dispose of prizes from athletic competition for personal gains."[80] An athlete of any age is ineligible for AAU competition if "an athlete receives compensation (or agrees to receive compensation) to compete or participate in any professional competition or exhibition in any sport."[81] Members also can receive gifts of clothing and equipment, and earnings derived from their fame as an athlete.

The AAU "reasonable expense" standard is looser than the NCAA's standard of "actual and necessary" expenses. For example, payments can be made in lieu of forgone earnings while preparing for an event. For adults, there is no prohibition against being paid to participate in amateur events. Thus, the NCAA rules regarding scholarships for student-athletes go far beyond the requirements for amateur status of the U.S. governing body for amateur sports.

Among other sports, some of the interesting rules are as follows. USA Cycling organizes Collegiate Cycling, which sponsors races involving varsity teams.[82] Cycling is one of the few intercollegiate sports that are not governed by the NCAA. To field a team, a college must agree, among other things, to award at least $10,000 per year in financial aid to cyclists and to pay the entry fees for team members in Collegiate Cycling events.

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79. The characterizations of amateurism as defined and enforced by the AAU were derived from the AAU Code Book at http://aausports.org/AAUInfo/CodeBook.aspx.

80. *Ibid.*, Article III.B.2.

81. *Ibid.*, Article III.B.3.

82. See http://www.usacycling.org/collegiate/ *(last visited 8/29/12)*.

Collegiate Cycling makes no distinctions between amateurs and professionals, and pro cyclists who are attending college are eligible to participate in its events.

USA Fencing allows fencers to be paid, but requires approval by the organization. Fencers are allowed to participate in promotions, but only as partners with USA Fencing. The International Ski Federation also requires that promotional activities be undertaken in partnership with the organization. Similarly, US Figure Skating must approve agreements by skaters to receive pay for performance or promotions. Skaters are prohibited from owning an ice show, an ice arena, an exhibition tour, or a competition that is not sanctioned by the organization.

The US Golf Association has published a guide to the nature of amateur golf.[83] Among the differences between the NCAA and USGA rules are the following. First, a USGA member may compete in professional tournaments and even enter events to qualify for the professional tour without giving up amateur status as long as the player waives the right to any prize money. Second, an amateur golfer may hire an agent as long as the agent does not pay the amateur. Third, an amateur may receive prizes that are unrelated to winning the competition, such as, for example, a prize for a hole-in-one. Fourth, an amateur can receive a prize with a retail value of less than $750, and can receive multiple awards from different donors for the same event. Fifth, an amateur golfer may receive subsistence expenses to defray general living costs as long as the payments are approved by and paid through the athlete's national golf authority.

The organizations that have established rules defining amateurism, while generally adopting more lax standards than the NCAA, have done so on the basis of the

83. U.S. Golf Association, *Rules of Amateur Golf*, January 1, 2012.

purpose of participation, much like the standard in the NCAA Constitution. These organizations do not engage in the detailed cost control that is practiced by the NCAA, do not base their rules on the goal of competitive balance, and do not earn substantial revenues from staging amateur events (although some, like the USGA and USTA generate substantial revenues from open and professional events). Thus, there is no objective basis for the specific definition of amateur that the NCAA uses, and the claim that the goal of amateurism leads to the NCAA's limitations of scholarships.

Competitive Balance

Because the NCAA has not offered any evidence to support its claim that its restrictions on sharing licensing income with student-athletes, including former student-athletes, would undermine competitive balance, a conclusion on the information and methods that would be used to establish this proposition is premature. Competitive balance itself is an elusive concept. Economists have identified three different versions of the concept: (1) games are close and either team has a chance to win (match balance); (2) championship races are close, with teams in contention until the last game of the season (championship balance); and (3) championships rotate among teams over several seasons (inter-season balance). The NCAA has not made clear which of these concepts are crucially dependent on its scholarship limitations.

As a matter of economics, there is no reason to believe that scholarship limits will contribute to competitive balance. The key features working against balance are that students get to pick among colleges and colleges differ in intensity of demand for quality in a given sport, in part because they differ in the revenue that they can generate from a

sport. As in the analysis of competition for coaches, colleges with more revenue persistently can outbid colleges with less revenue for the top coaches and can spend more on other things, such as stadiums and training facilities, to attract student-athletes.

For these reasons, research in the economics of sports concluded long ago that the only way to achieve competitive parity among schools was to randomly allocate athletes and coaches among teams and prohibit athletes and coaches from switching after they have been allocated. With an unfettered competitive market for coaches and freedom of choice among student-athletes, the expected result is that the colleges with the most revenue will hire the best coaches and build the best facilities, and that as a result they will attract the best student-athletes. Interestingly, a market for student-athletes actually could improve competitive balance. If teams can pay different amounts to different students, a lesser school may find that it is willing to pay more for its first five-star athlete than Alabama or USC is willing to pay for its tenth five-star athlete. If so, the lesser schools could be somewhat more successful than they are now in recruiting top players. But even in the best of circumstances, as long as coaches and athletes have a choice, the colleges with the most to spend will have the best teams. The main effect of the scholarship limits in comparison to a market allocation is to transfer wealth from student-athletes to expenditures on coaches and facilities.

The NCAA itself does not believe that Division IA football and Division I men's basketball is competitively balanced. One NCAA official characterized Division I as being divided into the top 25 percent (the "haves"), the middle 50 percent (the "have-nots"), and the bottom 25 percent (the "forget-about-its"), and stated that the last group

"has largely stopped trying to compete."[84] In practice, the NCAA never has been competitively balanced. Since 1950, 13 schools have accounted for 50 percent of the appearances in Final Four games in the NCAA men's basketball tournament.[85]

Wins are concentrated among the top schools because of the concentration of the top recruits in these programs. For the data reported elsewhere on recruits between 2007 and 2011, the schools who belong to the six BCS conferences accounted for 23 percent of all basketball scholarships and 34 percent of all football scholarships among recruits that were rated by Rivals.com. Yet for five-star recruits, 92 percent of basketball recruits and 86 percent of football recruits chose BCS schools. For four-star recruits, 83 percent of basketball recruits and 79 percent of football recruits attended BCS schools. These data bear out the theoretical analysis above that in the current system the best players go to the schools that have the most revenue and spend the most.

The evidence about competitive balance, no matter which concept of balance the NCAA intends to advance, involves examining the playing records and recruits of Division I schools and comparing playing success to components of costs and revenues. All of this information is common to all members of the injunctive class.

Financial Distress

The NCAA has not produced detailed financial information pertaining to each

84. NCAAPROD00148806-10 at 07-09.

85. Jim Peach, "College Athletics, Universities and the NCAA," *Social Science Journal*, Vol. 44 (2007), pp. 11-22, updated by Dave Berri, "Would Paying College Players Really Destroy Competitive Balance?" *Freakonomics*, March 15, 2012. Berri elsewhere concludes that the supply of talent is what drives competitive balance, not any institutional restrictions: "The underlying population of players the sport can employ primarily determines competitive balance." Dave Berri, "Is There a Short Supply of Tall People in the College Game?" *Economics of College Sport*, 2004.

Division IA football program, each Division I basketball program, and the other revenues and costs of each Division I college. Members of the NCAA already must report the relevant data annually to the U.S. Department of Education for the purpose of monitoring compliance with the anti-discrimination provisions of Title IX. To evaluate the claim of financial hardship requires this type of detailed financial information.

Whereas financial distress may be conceived as a matter of cost, the NCAA might argue that a relaxation of the NCAA's scholarship limits would so adversely affect the demand for Division I men's basketball and Division IA football that these colleges would be plunged into financial distress.

Because the NCAA has not presented the evidence to support the claim that the demand for NCAA sports hinges on adhering to the association's definition of amateurs, a complete treatment of this issue must await the NCAA's submission of evidence. As discussed elsewhere, the NCAA has somewhat liberalized its financial rules during since the mid-1980s, beginning with the decision not to subtract the full value of a Pell Grant from the amount of permissible institutional financial aid. As the restrictions on financial aid have become somewhat more relaxed, demand for college sports has continued to grow. The implication is that the relationship between the demand for college sports and the amount that is paid to student-athletes cannot be a smooth, continuous relationship. The NCAA has not suffered in the past when its former definition of amateurism was abandoned in favor of a new, more generous definition.

Another piece of evidence pertains to the reactions of fans to a recent example of violations of the NCAA's rules. During the 2010 football season, six Ohio State players, including star quarterback Terrelle Pryor, were found to have sold championship rings,

jerseys and trinkets in return for reduced prices for tattoos and money for their families. The NCAA announced punishments for these athletes in late December 2010, a few days before Ohio State game against Arkansas in the Sugar Bowl. Rather than ban these players from the Sugar Bowl, the NCAA allowed them to play but ruled that five would be required to sit out the first five games of the 2011 season and the sixth would be forced to sit out only the first game.[86] Because the violations received extensive national publicity, sports fans were aware that Ohio State was playing the Sugar Bowl game using six athletes that had violated the NCAA's rules defining amateurism. Despite the presence of these athletes, the 2011 Sugar Bowl drew 25 percent more viewers than the 2010 game had attracted, while all of the other 2011 BCS games had double-digit drops in viewers compared to the previous year.[87] Thus, the violations of the NCAA's rules do not appear to have had any effect on the demand for this game.

The Ohio State case is by no means the only example of major rule violations in recent years. For example, the University of Southern California (USC) recently emerged from a probationary period when it was required to play with fewer scholarships and not to participate in bowl games because of excessive payments to its Heisman Trophy winning running back, Reggie Bush. During the probationary period USC's teams, while not quite so dominant, played well enough to qualify for bowl games, and in 2012 are ranked Number 1 in the preseason polls. And the financial condition of the athletics program was solid enough to enable the school to build a new $70 million

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86. "Ohio State Football Players Sanctioned," *ESPN*, December 26, 2010, at http://sports.espn.go.com/ncf/news/story?id=5950873 *(last visited 8/29/12)*.

87. Michael Hiestand, "ESPN's Bowl Ratings Are No Bonanaza," *USA Today*, January 12, 2011, at http://www.usatoday.com/sports/columnist/hiestand-tv/2011-01-11-bowl-ratings_N.htm *(last visited 8/29/12)*.

training facility. Thus USC seems none the worse for a very substantial violation of the NCAA's amateurism standard.

Another piece of evidence pertains to the salaries of coaches. As discussed elsewhere, early in the 20th Century, the issue of professionalism focused as much on coaches as on players. Yet not only are coaches now professionals, in the past two decades the salaries of coaches have skyrocketed without any adverse effect on the popularity of their college teams. There is no basis for believing that fans are not put off by $5 million coaches but will be put off if former players are paid for the use of their images, likenesses and names.

Despite the absence of credible evidence that a substantial relaxation of the restrictions on scholarships for student-athletes would adversely affect the demand for major college sports, the evidence that would be needed to settle the issue is systematic analysis of the effects of professionalism on the popularity of college sports. This evidence would require evidence that is common to members of the injunctive class.

DAMAGES

The financial harm to former student-athletes due to the NCAA's rules about licensing their images, likenesses and names can be established as follows. The first step is to collect information about the revenues of the NCAA and its member institutions, both colleges and conferences, during the class period from licenses for products that include the images, likenesses and/or names of student-athletes. The second step is to determine how these revenues would be allocated between colleges and student-athletes in the absence of the restrictions that the NCAA places on sharing this revenue. The third

step is to identify the members of the damages class, and to allocate the student-athlete share of this revenue among members of the class. This section spells out how these calculations can be done and provides examples. In every case, the methods and the data that are used are predominantly common to members of the damages class.

Revenues

As mentioned elsewhere the NCAA and its member institutions derive licensing revenue from many sources. The revenue examined here is income from licenses during the class period for content involving teams and including the images, likenesses and/or names. The damages calculations are limited to revenues from three types of licensed products: (1) telecasts of live and archival games that are licensed by the NCAA, the BCS, and the conferences; (2) sales of highlights and clips of games through the NCAA's licensing agencies; and (3) video games. Many other products are excluded from the damages calculations because insufficient information has been produced to support a reasonable damage calculation. Exhibit 11 contains a list of the data that are available for these calculations. Without additional discovery from colleges about other licensing income, calculation of damages from all licensing income is not possible.

The revenues that enter into the damage analysis are collected by consortiums of colleges: conferences, the BCS organization, and the NCAA. These organizations then divide the revenue among colleges. Damage calculations are based on the distribution of revenues by these entities.

An important component of revenue is the income from the NCAA basketball tournament. Not all of this revenue is distributed to Division I colleges. Some is

distributed to other colleges and some is retained to finance other NCAA activities. Nevertheless, the damage calculation distributes the amount that goes for other purposes to Division I schools on the basis of their shares of distributed revenue for the purpose of calculating the share of licensing income that would go to players. The basis for this decision is that regardless of the other uses to which some of this revenue is put, the revenue is generated in part by the use of the images, likenesses and names of the student-athletes and so a portion ought to be included in the revenues that they receive from licensing.

Most licensing revenue is reported for a specific sport, but sometimes basketball and football revenues are reported together. In these cases the damage method allocates revenue between basketball and football in the same proportion as the revenues from each sport that are distributed by the NCAA and the conferences, based on the information that the schools submit to the NCAA about how they allocate these funds across sports. That is, if the revenues that a school designates for football are three times as large as the revenues that it designates for basketball, then 75 percent of the dual-sport broadcast revenue is allocated to football and 25 percent to basketball. Because the NCAA has not yet submitted all of the relevant revenue data, a comprehensive analysis of broadcast revenue is not yet possible. In the interim I have estimated the split of revenues for the schools for which no data have been produced as the average revenue for schools for which I have the necessary data. If the NCAA provides complete data after this report is submitted, as I understand will occur in September, it is a simple matter to substitute the correct data for the estimates.

At present contracts for live television broadcasts normally convey rights to future

use of the telecasts for only a brief period after the live broadcast. The recent creation of conference television networks that devote substantial program time to rebroadcasts and highlights has led to contracts with major television networks that are only for live rights. But older contracts in the class period allow for longer periods of future use of game films and videos. For example, a license of live telecasts may include future rights for rebroadcasts of entire games or highlights. The problem that this circumstance creates is how to divide the rights between the live telecast and the use of the archives.

The allocation between live and rebroadcast games is derived from the *Expert Report of Larry Gerbrandt*. The allocation of licensing revenues between live rights and rebroadcast rights is based upon the revenues to channels from both live and archival games. Channels receive revenue from two sources: advertising and affiliate fees to cable and satellite distribution systems. For both live broadcasts and rebroadcasts advertising revenue is estimated by multiplying the cost of an ad per thousand households (CPM) by the average audience during the game by the number of commercials per hour. This procedure produces the fraction of ad revenues for all televised games that is attributable to live and rebroadcast games.[88]

Affiliate fees are determined by the extent to which a channel is a "subscription driver" – that is, the extent the operator of a cable or satellite distribution system believes that its customers make decisions about which television distribution system to use based on the presence of that channel. Channels featuring popular sporting events are generally regarded as subscription drivers and so can charge higher affiliate fees.

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88. To account for a game which contained a mix of current and former players at the time of rebroadcast, the Nielsen data were analyzed to treat the games as being "partially live" and "partially archive" in proportion to the number of players identified in each category.

Two procedures have been used to allocate affiliate fees between live and archival games, both of which are derived from Mr. Gerbrandt's report. The first method divides affiliate fees in the same proportions as advertising revenue, implying that the willingness to pay of consumers for a program is roughly proportional to the willingness to pay of advertisers to gain access to those consumers. The second method bases the allocation on the number of viewer hours accounted for by each type of broadcast, implying that each viewer who watches each program is willing to pay the same amount for an hour of viewing, regardless of the program. Because live games have a higher CPM than archival games, the allocation to live games is higher for the former than for the latter. Damages based on both assumptions are presented here.

To allocate total licensing revenue between live and archival rights, the first step is to add the advertising revenue and affiliate fees that have been calculated for each category of broadcasts. These allocations are then used to calculate the fractions of total channel revenue that is accounted for by live and archival broadcasts. These fractions are then multiplied by the revenue from the license to obtain an allocation between the two types of broadcasts.

[redacted]

89. For examples, see Bates Nos. XOS 000665 – 686 [Pac-10]; XOS 000016 – 40 [Arizona], XOS 000146 – 157 [California]; XOS 000649 – 653 [Oregon]; XOS 000842-856 [Stanford]; XOS 001019 – 1023 [USC]; XOS 0010905 – 1106 [Washington]; XOS 001086 – 1094 [Washington St]; XOS 001168 – 1219 [SEC]; XOS 000001-15 [Alabama]; XOS 000043 – 58 [Arkansas]; X0S 000073 – 81 [Auburn]; XOS 000279 – 288 [Florida]; XOS 000318 – 328 [Georgia]; XOS 000413 – 419 [Kentucky]; XOS

[redacted] In these cases a license that was purchased after a season is completed[90] and does not indicate the year of the licensed clip is assumed to be from the recently completed year, and therefore allocated between current and former players in proportion to their numbers on the roster. Licenses that include rights to games in the current season are classified as current.

Video games contain teams from the year in which the game is released, and sometimes contain teams from the past as well. The procedure that is used to allocate the revenues from video games between current and historical teams is as follows. The available data for video games are the revenues from EA sports for the NCAA basketball and football games. These revenues are broken down by the specific game and year, and for each year the teams that are included in the game can be identified. For games that include "classic" teams from past years the revenue attributed to each school must be divided between current and old teams, based on the number of teams in each category in the year in which a sale is attributed to that game. Some older games continue to be sold after the year in which they were released, in which case all of the teams that account for that revenue are historical, although they will feature teams from very recent years in which many of the players on teams are still current as of the purchase date.

Some video games include teams that mix former and current players and/or include all-time all-star teams from a specific school. In the first case the revenue

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000438 – 447 [Louisiana State]; XOS 000613 – 621 [Mississippi]; XOS 000793 – 802 [South Carolina]; XOS 000894 [Tennessee]; XOS 001043 – 001049 [Vanderbilt].

90. This would be the first quarter of each calendar year for football and the second quarter of the calendar year for basketball. Similarly, if an undated video is sold prior to the start of the season (i.e., before Q2 for football or Q3 for basketball), it is assumed to be from the prior season.

attributed to the team is divided between current and historical teams in proportion to the fraction of players in each category. In the second case the proper procedure would be to consider the all-star group as a team and to regard this as a historical team when dividing between current and former teams.

The end result of these calculations is an allocation of all licensing revenues for every college, divided between men's basketball and football, and for each college between current teams and historical teams. Current teams account for most revenue because live television rights account for a large proportion of total licensing revenues and because most video game sales are of recent games with mostly current teams.

Allocation between Colleges and Student-Athletes

The next step in the procedure is to calculate the share of the revenues that have been allocated to colleges that would be paid to student-athletes in a hypothetical group license for each sport. As discussed elsewhere, standard practice for group licenses is that each member of a group receives an equal share of group revenue. The alternative assumptions are that the group license would pertain to all colleges and student-athletes in a conference, or to all colleges and student-athletes in Division IA football (for football revenues) and Division I men's basketball (for basketball revenues). Because the assumption that the appropriate unit of analysis is a college and its players is most consistent with competition among colleges, I have made that assumption here. The calculations would be somewhat easier under the assumption that the relevant groups are all players in a conference or a division.

In determining the division of licensing income between colleges and student-

athletes, I have considered three pieces of information. The first is the economic theory of bargaining. The second is practices in professional sports. The third is practices in other entertainment industries. All lead to a similar conclusion: the appropriate division is 50-50, with one exception.

The theory of bargaining, based on the ideas of John Nash, involves comparing the net surplus (revenues over costs) to each negotiating party with and without an agreement.[91] Application of Nash bargaining theory in this case is easy because the net surplus accruing to each side, colleges and student-athletes, is zero if they attempt to license the joint products at issue here, which combines names and images of both colleges and students. One cannot license a telecast of a game if either the colleges or the players do not agree to a license. Hence, if both colleges and players can veto a license, each is in the unfortunate position of having zero value in the absence of an agreement. At the other extreme, the net surplus from cooperation is the entire revenue from the license. The reason is that allowing a game to be telecast, allowing a licensee to make use of old footage, or allowing EA to make a video game that includes a college and its players all are costless to both the colleges and the student-athletes. In short, all gross revenue from licensing is a net increase in the surplus accruing to the combination of the college and the team. In this circumstance, the Nash bargaining outcome is a 50-50 split of the licensing revenue.

The evidence from professional sports is consistent with Nash bargaining theory.

[redacted]

[91] See for example, Jean Tirole (1989), *The Theory of Industrial Organization*. p. 25.

[redacted] The most recent collective bargaining agreement between the NFL and the NFL Players Association (NFLPA) provides more indirect evidence. The agreement sets team salary caps as a fraction of revenue, and the fraction of broadcast revenue that is included in the cap is 55 percent.[92] In the NHL, the salary cap does not vary among the types of revenue, but ranges between 54 and 57 percent of all revenues.[93] This agreement has expired and negotiations are in progress to establish a new cap.

[redacted]

The last piece of evidence pertains to licenses for music. Settlements of antitrust cases against ASCAP and BMI, the two largest performance rights organizations (PRO) that license the rights to musical compositions, provide for blanket licenses.[95] If negotiations fail, the royalties are determined by the trial court in the antitrust cases, the federal district court in New York City.[96] A similar process is used for licensing performance rights to sound recordings. The Copyright Royalty Board sets royalties if

[92] See *NFL Collective Bargaining Agreement*, August 4, 2011, p. 80.
[93] See *NHL Collective Bargaining Agreement*, July 22, 2005, p. 193.

94. [redacted]

95. *USA v. ASCAP*, "Second Amended Final Judgment," U.S. District Court, Southern District of New York (White Plains), CA No. 41-1395 (WCC), pp. 8-10.

96. *USA v. ASCAP*, "Second Amended Final Judgment," U.S. District Court, Southern District of New York (White Plains), CA No. 41-1395 (WCC), pp. 12-13.

negotiations fail.[97] The PRO that represents record companies in these proceedings is SoundExchange.[98] In both processes the standard for setting rates is the outcome that would occur in a competitive market (the "willing buyer, willing seller" standard). In both cases the royalties from these licenses are shared equally between the company (music publishers or record companies) and the talent (composers or performers).[99, 100]

Based on these examples, the sharing proportion that I have adopted is a 50-50 split between colleges and student-athletes for all licenses except video games, for which I adopt the share that has arisen in the NFL.

Allocation to Players

If a licensee purchases the right to use a specific game or footage from a game, the revenues from that license easily can be attributed to a specific college, a specific team that was fielded by the college, and hence a specific group of players that can claim equal shares in that revenue. But licensing or archival material is rarely so simple. Often a license for the rights to televised games or footage from those games gives the licensee access to a library. The license does not specify in advance which games or clips actually will be used. In these cases, the proper way to view the license is as an option to use everything in the library, and the proper treatment is to divide the revenue equally among all the players on all the teams for which an option has been purchased.

The principle for calculating damages per player is as follows. First, all revenues

97. *Copyright Act*, Sec. 114(f)(1) and (2), and Sec. 801(b)(1).

98. 37 C.F.R. Sec. 380.4(b) and Sec. 380.13(b).

99. ASCAP, "Articles of Association of the American Society of Composers, Authors and Publishers," May 2002. Pg. 20.

100. Copyright Act, Sec. 114(g)(2).

are allocated to either basketball or football at a college. These revenues are then multiplied by the appropriate sharing formula between colleges and student-athletes. For each college, each revenue stream is further divided between current and former teams. Reflecting the common practice in group licenses, the revenue that is assigned to current players is divided equally among all members of the current team.

The most accurate procedure for archival rights is to base the allocation on the number of players who are covered by the license. For video games, one can inspect the game to determine the number of teams in the game and assess which teams are current versus historical. As is consistent with the assumption of a group license, the player share of the revenue derived from historical teams is divided equally among all players on those teams.

In a few cases a team in a video game includes both current and former players. The appropriate procedure in this case is to regard the team as a composite of current and former players and to assign the players' share of revenues to each type of player on the basis of the fraction of players in the game who are current players versus the fraction that are former players. Some games include players from different eras (an all-time all-star squad for a particular school). The best procedure here is to treat the all-star roster as a team, assign it a share equal to the shares of other teams, and then include those players among the former players receiving an equal share of former player video game revenues. At this point the composition of the rosters of the all-star teams has not been produced or otherwise obtained, so while I have included them as a team in my division between current and former teams, I have not included any of the players on the roster of those all-star teams in my calculation unless they also appear on another team. Otherwise, the

revenues from video games have been allocated to the players on the rosters of current and former teams that are included in the game.

The licenses for televised games are less clear than the video games about exactly the rights that are conveyed. In some cases a licensee pays a fixed annual amount to acquire the right to televise a package of both live and archival games over several years. To calculate damages, the annual payment is divided between live and archival rights according to the procedures in the report by Mr. Gerbrandt. The archival portion of the rights is then assigned to former players for the historical games that are included in the license, which in some cases may be the entire library in possession of the entity that is licensing the rights. Because a very large fraction of the revenue data available cannot be traced to specific games, the relevant group license is assumed to apply to the entire library. In all cases the revenues attributed to historical games are divided equally among all players on all teams that are covered by the license. In the case of revenues associated with the entire library, all former players share equally.

One complexity in this procedure is identifying the players on the roster of each

101. See Note 88, supra.

team in each year. This information is possessed by the colleges, but it has not been produced. Hence, lists of the rosters have been collected from public sources for each Division IA football team and each Division I men's basketball team in each year, creating a master list of student-athletes who have suffered financial loss because they were not paid for the use of their images, likenesses and names. The process for calculating damages for each class member is simply to divide the licensing income attributable to players for each revenue category by the number of players on the relevant rosters. These equal amounts for every player have been separated into damages to former players and damages to current players.

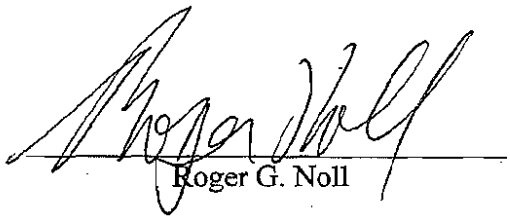
Example Calculation

To illustrate the damages procedure, under my direction economists at OSKR have collected all of the available information from discovery and public sources about the revenues from television, clips, highlights and video games for 2009-2010 for all the colleges in two conferences, the Pac 10 (now Pac 12) and the SEC. Exhibit 12 contains a summary of the damage calculations for the Pac 10 and Exhibit 13 summarizes the damages for the SEC. Each exhibit shows separate damages for basketball and football, and separates the damages between current and former players. Exhibits 14 and 15 contain illustrative examples of the calculations of damages per player. Backup tables that contain the elements of the calculations that go into these exhibits are contained in Appendix C for the Pac-10 and Appendix D for the SEC. Appendix D also includes an example of football video game damages from 2005-06, to illustrate those damages in a year in which the football video game included historical teams in the shipped version.

Appendix E contains additional information on rosters.

The example calculations demonstrate that the method outlined above is feasible. This method begins with total men's basketball revenues for each Division I school and total football revenues for each Division IA school, and follows a formulaic procedure, based on theory and facts about group licensing, to allocate this revenue to each player, whether current or former, who played on a team that generated licensing revenue during the class period. This procedure is predominantly common to all class members.

I declare that the foregoing is true to the best of my knowledge and belief. Executed on August 31, 2012, at Stanford, California.



Roger G. Noll