Professional Football—Can You Join the League?

Lesson Authors

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The authors thank Dr. Paul Grimes for his assistance in the development of this lesson plan. Portions of this lesson were inspired by the following book: Register, Charles and Grimes, Paul. *Economics of Social Issues*. 21st Edition. New York: McGraw Hill Education, 2016.

Standards and Benchmarks (see page 19)

Lesson Description

Students apply economic concepts to a professional football league. The lesson underscores the importance of incentives, control of supply, and potential market inefficiencies resulting from a cartel. Students assume one of two roles: either (i) a member of a team owner group trying to get its team into the Professional Football League or (ii) a member of the Professional Football League Expansion Committee deciding whether new teams are admitted.

Grade Level

9-12

Advanced Placement Economics

Concepts

Cartel

Market structures

Profit maximization

Prior Content Knowledge Required

Incentives

Market efficiency

Market structures and competition

Monopoly

Monopsony

Oligopoly

Supply and demand

Compelling Question

How does economic competition affect professional sports leagues and teams?

Objectives

Students will be able to

- recognize competition and incentives in professional sports,
- describe a cartel,
- describe a monopoly,
- explain how professional sports leagues exhibit behaviors of a cartel and a monopoly, and
- interpret the interdependent relationship between a professional sports league and the individual teams in that league.

Time Required

75-90 minutes

Materials

- Visual 1: League Restrictions
- Visual 2: Market Structures
- Visual 3: The Case of Professional Sports as a Cartel
- Visual 4: League Success
- Handout 1: League Expansion Committee Instructions, one copy for each of three or four committee members
- Handout 2: Team Roster, one copy for each student
- Handout 3: Assessment, one copy for each student
- Handout 3: Assessment—Answer Key for the teacher
- Calculators (optional)

Procedure

1. Introduce the topic by asking students to share their preferred sports and to name some of their favorite professional teams. (*Answers will vary*.)

2. Ask students for examples of economic decisions professional sports teams face. (*Answers will vary but may include personnel decisions, stadium maintenance or construction, ticket pricing, vending choices, or team merchandise selection.*)

3. Explain to students that to better understand economic decisions in sports, they will participate in a role-play activity and will act as either
   (i) a member of a team owner group trying to get their team accepted into the Professional Football League or
   (ii) a member of the Professional Football League Expansion Committee deciding which new teams to accept into the league.

4. Ask the class who among them understands football statistics, such as rushing yards, completion percentage, receptions, interceptions, tackles, and sacks. Choose three or four of these students to be the League Expansion Committee. Have them assemble apart from the rest of the class and distribute to each committee member a copy of *Handout 1: League Expansion Committee Instructions* and a copy of *Handout 2: Team Roster* (so they know the teams' procedures). **Quietly make the following clear to the League Expansion Committee: They are not to show Handout 1 or discuss the restrictions with any of the team owners at any time during the role play.** Ask the League Expansion Committee members to read Handout 1 silently and wait for further instructions.

5. Choose three or four students who understand football statistics to lead team owner groups, and divide the remainder of the class among the team owner groups.

6. Distribute a copy of Handout 2 to each student in the team owner groups. Invite students to read the directions aloud.

7. Explain to the students that once each owner group completes its team lineup, it will send its leader to the League Expansion Committee to present the lineup for consideration. The league will accept only two new teams for the coming season.

8. If there are no questions, instruct the owner groups to create their team rosters.

9. Once owner groups begin working on their lineups, meet with the League Expansion Committee privately. Explain that it is unlikely any teams will be accepted on the first attempt. The owners will try to create the best *teams* possible, but the League Expansion Committee should try to create the best *league* possible. Remind them not to disclose the restrictions on Handout 1 or give away that it is difficult to be accepted into the league. They are to say only vague, general things (as noted on Handout 1) when reviewing the lineups.

   NOTE: Some team leaders will recognize the replies as restrictions in terms they have heard such as a "salary cap." Quietly ask those students to hold their thoughts until the end—perhaps call on them during the discussion. If team groups ask about their budget, tell them they are not given a specific amount; the owners will pool resources to meet the expenses. Some students will be frustrated by not being accepted into the league. **(This activity can get chaotic!)** Watch for this and keep things calm, checking on groups as they work.

10. Allow groups to present a lineup to the League Expansion Committee at least once. Once two teams have been accepted or two to three groups have presented to the League Expansion Committee a second time, stop and debrief the activity by discussing the following:
    - How many teams were accepted into the league on the first attempt? (*Answers will vary, but most likely one or none.*)
    - Why was it hard to get a team accepted? (*Answers will vary but may include player restrictions or terms they have heard such as a salary cap.*)
    - How did the incentives of the team owner groups and League Expansion Committee differ? (*Answers will vary, but the team owner groups acted in their own best interest and tried to create the best teams possible to maximize profits. The committee acted in the league's best interest by placing restrictions on teams to maximize collective profits and league success.*)

11. Display *Visual 1: League Restrictions*, read the restrictions, and then discuss the following:
    - Who were the players you wanted to keep but had to remove from your roster? (*Answers will vary.*)
    - Why did you choose those players for your team? (*Answers will vary.*)
    - How might losing those players affect your team's performance? (*Answers will vary but may include that the team may not perform as well without the players.*)
    - Why would the league implement and enforce the restrictions? (*Answers will vary but may include the following: The league does not want the best players on only a few select teams. Owners do not want to compete with each other on player salaries. The league does not want one or a few dominant teams, because the league will not do as well.*)

12. Display *Visual 2: Market Structures* and review the definitions as a class. Explain that individual teams are compelled to follow the league rules as enforced by the commissioner. The process is more formalized than price fixing or colluding oligopolies: The commissioner can act in the best interest of the league, not the individual teams.

13. Display *Visual 3: The Case of Professional Sports as a Cartel*, invite students to read it, and then explain the following:
    - Pro sports leagues are different from collusive oligopolies, as leagues are highly formalized and the market outcome is that of a shared monopoly.
    - Professional baseball's legal exemption from anti-trust laws allows it to behave as a cartel even though cartels are illegal in other markets in the United States. Although football is not legally exempt from *all* anti-trust laws, it still operates like a cartel.
    - By acting as a cartel and keeping teams somewhat evenly matched, a league is able to accomplish the shared-monopoly outcome, maximizing collective profits.

14. Display *Visual 4: League Success*, invite students to read it, and then discuss the following:

    - Restrictions allow sports leagues to operate as cartels and control the supply of teams. Salary caps prevent one team from paying much higher wages than others teams, which is intended to keep competition relatively even. Barriers such as permission to join the league (and start-up costs) prevent market entry and competition.

    1. **Cartels must control output—members agree to the terms of the cartel.**
        - Cartels limit output and try to keep competitors out of the market, to maintain monopoly power. Sports cartels try to accomplish this by seeking out exclusive contracts to hold games in major stadiums and controlling player contracts. The Football Merger Act of 1966 allowed the American Football League to be absorbed into the National Football League's (NFL's) already established cartel. An individual sports teams can only be profitable as long as its league exists.[1]
        - The NFL game schedule is set up so that opponents are based on competitive strength.
        - A cartel's coordinated behavior can also be seen in how it divides the revenue from ticket sales. The NFL gives the home team 60 percent of the revenue from a game and the visiting team the other 40 percent. Additionally, the NFL has pooled broadcast rights. In 1964, the NFL sold the rights to broadcast games on TV for $14.1 million. In 2011, they had deals with channels such as CBS, NBC, Fox, and ESPN and paid an average of $4.4 billion annually from 2014 to 2022.[2]
    2. **Cartel members must produce a similar product (e.g., sports or oil).**
    3. **Cartels must divide the market and establish production quotas (e.g., a limited number of products or teams).**
        - Professional sports leagues maintain a shortage of teams and subsequently keep market power by limiting expansion. Franchises often threaten (and do) relocate to receive taxpayer funding for new facilities. For example, from 1990 to 2000, 10 new NFL stadiums opened, with a total cost of $2.677 billion (adjusted for inflation). Taxpayers financed 77 percent of the cost, equal to $2.057 billion.[3] Approximately $10 billion more was spent from 2000 to 2010 on 28 stadiums, with $5 billion coming from public sources. In other words, taxpayers provide about half the funding.[4]
            - o Do you think it is right to have the government subsidize the NFL's infrastructure, or should the free market decide? (*Answers will vary.*)
    4. **Cartels must prevent cheating through rules (e.g., NFL rules control most aspects of the league including payroll, drafting, and trading of players).**

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[1] Register and Grimes. *Economics of Social Issues*. p. 232.

[2] Register and Grimes. *Economics of Social Issues*. p. 234.

[3] Register and Grimes. *Economics of Social Issues*. p. 228.

[4] Register and Grimes. *Economics of Social Issues*. p. 238.

- The NFL is also a **monopsony**, a market with only one buyer, or in this case, one employer. Professional athletes have highly specialized athletic abilities. Each of the 32 NFL teams recruits (hires) only take two or three quarterbacks a season, which means fewer than 100 quarterbacks will make it. Overall, there are fewer than 200 quarterbacks in the NFL; compare this with four million teachers or 125,000 economists.[5] Since there are few professional leagues, athletes are limited in the places they can work, which gives the employer (the league) monopsony power to affect, perhaps even set, wages. In the NFL, the Players Association representatives negotiate for wages and benefits with the League (owners).

  NOTE: This is an excellent opportunity for a side-by-side comparison graph of perfect competition and monopoly (cartel) outcomes. It will show the differences in allocative efficiency and deadweight loss in terms of prices and the number of teams.

Closure

16. Review the main points of the lesson by discussing the following:
    - In which market structure do professional sports operate? (*A cartel or shared monopoly*)
    - In what ways does the NFL operate as a cartel or a shared monopoly? (*The Football Merger Act of 1966 between the American Football League and the NFL gave the league market power, as the dominant provider of professional football. Cartel: NFL teams coordinate the production and pricing of football to maximizes their joint profits. Shared monopoly: The NFL uses its market power to prevent others from entering the market.*)
    - How do sports cartels succeed?

      (*1. Cartels control output—members agree to the terms of the cartel.*

      2. Cartel members produce a similar product.

      3. Cartels divide the market and limit the number of teams.

      4. Cartels prevent cheating with rules [salary caps, etc.].[6])
    - How does maintaining a shortage of teams in a given sport and minimum expansion of a league help a sports league and its teams? (*Answers will vary but may include the following: Shortages can keep ticket and merchandise prices higher. For teams, there may be an incentive to move if tax-paying fans are willing to build new stadiums under the threat of their team leaving. From 2000 to 2010, $10 billion was spent on new stadiums. Half of the funding came from public sources.*[7])

[5] Register and Grimes. *Economics of Social Issues*. p. 232.

[6] Register and Grimes. *Economics of Social Issues*. pp. 231-39.

[7] Register and Grimes. *Economics of Social Issues*. p. 238.

Visual 1: League Restrictions

A team must replace players until the following restrictions are met:

1. The payroll may not exceed $70,000,000.

2. Only one player may have a salary above $16 million.

Visual 2: Market Structures

Monopoly—A firm that is the only seller of a product that lacks close substitutes; a market structure with very few sellers, which enables each seller to affect the total supply and the price of the good or service.

Examples: Utilities such as electricity, water, and natural gas. Utilities are often given exclusive rights by the government to provide these services and must follow government regulations.

Oligopoly—A market structure with few firms and a market that is difficult to enter. The firms sell either a standardized or differentiated product, and there is usually non-price competition. Individual firms have little control over product prices because of mutual interdependence, unless cooperation or collusion occurs among firms.

Examples: Car manufacturers, cell phone providers, airlines, computer software companies, and oil producers.

Collusion—When competing firms agree to work together (collude) to fix prices, share a market through production decisions, or otherwise limit competition. Firms may agree to work together, but individual firms can produce more than the agreed-upon quantity in an attempt to increase profits.

Example: Two competing software companies agree to charge a certain price for their respective, competing products.

Cartel—A group of businesses (firms) that formally agree to coordinate their production and pricing decisions in a manner that maximizes joint profits. Such an arrangement is more formal than collusion. Like colluding oligopolies, individual firms can produce more than the agreed-upon quantity in an attempt to increase profits.

Examples: OPEC (Organization of Petroleum Exporting Countries) and Major League Baseball.

Visual 3: The Case of Professional Sports as a Cartel

Professional Baseball's Exemption

Professional baseball was ruled exempt from anti-trust laws in 1922.

FEDERAL BASEBALL CLUB OF BALTIMORE, INC. v. NATIONAL LEAGUE OF PROFESSIONAL BASEBALL CLUBS, ET AL. No. 204. Supreme Court of the United States. Argued April 19, 1922. Decided May 29, 1922.[8]

- The ruling allows the league to coordinate and cooperate to maximize joint profits, forming a cartel. A successful cartel has a similar market outcome as a monopoly.
- While not completely exempt from anti-trust laws like baseball is, a professional sports association or league can act as a cartel, or shared monopoly.

The NFL

The NFL's shared-monopoly outcome is accomplished by the following:

- All teams are bound together contractually through the league office.
- The coordinated behavior among teams is much more than simple collusion.
- Teams collectively hire a commissioner to make sure everyone obeys the same set of rules.
- The commissioner has enforcement power over those who misbehave and try to cheat on contractual agreements.
- The formal agreements that tie the teams together result in a cartel.

[8] JUSTIA US Supreme Court. Federal Baseball Club v. National League, 259 U.S. 200 (1922); https://supreme.justia.com/cases/federal/us/259/200/case.html, accessed November 15, 2017.

Visual 4—League Success

How do cartels succeed?

1. Cartels must control output—members agree to the terms of the cartel.
2. Cartel members must produce a similar product (e.g., sports or oil).
3. Cartels must divide the market and establish production quotas (e.g., a limited number of products or teams).

   ### Example: NFL Lockout

   The lockout originated from a 2008 decision to back out of a collective bargaining agreement that included a salary cap. During the lockout, training camps and pre-season games were delayed. After 132 days, a new collective bargaining agreement with free-agency policies and a salary cap of $120.375 million was approved by both the NFL and the NFL Players Association, thus ending the lockout.[9]

4. Cartels must prevent cheating through rules (e.g., NFL rules control most aspects of the league, including payroll, drafting, and trading of players).

[9] ESPN. “NFL Lockout.” December 5, 2012.

Handout 1: League Expansion Committee Instructions (page 1 of 3)

IMPORTANT: Do not let the team owners see this form. They are not aware of the restrictions, so do not share the restrictions with them at any time during the role play.

League Restrictions

A team must replace players until the following restrictions are met:

1. The payroll may not exceed $70,000,000.
2. Only one player may have a salary above $16 million.

Role: You are a member of the League Expansion Committee, which operates as a cartel. As a cartel, you have market power and wish to restrict additional competitors from entering the league while also maintaining competition within the league.

Directions: Review the team roster provided by each owner group. Use the charts on pages 2 and 3 to evaluate the rosters. Teams *must meet all criteria* to be eligible to enter the league. Select two teams to enter.

The economic incentives of the owners and the committee differ. The owner groups want to create the best teams possible to maximize profits; so, each group will behave in its own best interest. The committee wants to create the best league possible to maximize collective profits; so, you are to behave in the best interest of the league. It is not likely any team will be accepted on the first attempt, because it will be trying to create the best team possible. This represents the different incentives owners face in contrast to the League Expansion Committee as a group.

Do not give away that it is difficult to be accepted into the league. Say vague, general things to the owners when they present their rosters. Examples include the following:

- "You'll have to replace this quarterback."
- "This receiver has to be replaced."
- "This player is paid too much."
- "These two safeties can't both be on your team."
- "You can keep one of these players, but not both."

Handout 1: League Expansion Committee Instructions (page 2 of 3)

Team:	**Proposal 1**	**Proposal 2**
1. Team payroll is $70,000,000 or less.		
2. Only one player's salary is above $16 million.		
Player 1		
Player 2		
Player 3		
Player 4		
Player 5		

Team:	**Proposal 1**	**Proposal 2**
1. Team payroll is $70,000,000 or less.		
2. Only one player's salary is above $16 million.		
Player 1		
Player 2		
Player 3		
Player 4		
Player 5		

Handout 1: League Expansion Committee Instructions (page 3 of 3)

Team:	**Proposal 1**	**Proposal 2**
1. Team payroll is $70,000,000 or less.		
2. Only one player's salary is above $16 million.		
Player 1		
Player 2		
Player 3		
Player 4		
Player 5		

Team:	**Proposal 1**	**Proposal 2**
1. Team payroll is $70,000,000 or less.		
2. Only one player's salary is above $16 million.		
Player 1		
Player 2		
Player 3		
Player 4		
Player 5		

Handout 2: Team Roster (page 1 of 3)

Team name: ___________________________________

Role: You are a group of profit-maximizing entrepreneurs. You are pooling assets and investing in a football expansion team and hope to enter the Professional Football League next season. You have a list of available football players. You will choose 5 offensive players and 7 defensive players to complete a team lineup. Choose the 12 players according to the specifications on the chart on pages 2 and 3. Add the salaries, calculate the total team payroll, choose a team name, and send your group leader to present your proposal to the League Expansion Committee. Based on the players' statistics, select the team you think will maximize your profits.

Rushing yards per game is how many yards a player carries the football after it is handed off but before the player is tackled or scores.

A **completion percentage** is calculated by dividing the number of passes completed by a quarterback by the number of attempted passes. The higher the percentage, the more effective a quarterback is at completing passes.

Receptions occur when forward passes from behind the line of scrimmage are caught by a player who either scores a touchdown or is downed.

Interceptions are forward passes caught by a player from the other team's defense.

Tackles are plays intending to impede the other team from scoring by bringing a player to the ground.

Sacks occur when a player is tackled behind the line of scrimmage before he can pass the ball.

Handout 2: Team Roster (page 2 of 3)

Name	Position	Stats (regular season)	Salary	Selected?
		OFFENSIVE PLAYERS		
Running backs: Pick 2		**Rushing yards**		
Amdahl	Running back	1305	$14,000,000	
Benitez	Running back	999	$6,000,000	
Coppock	Running back	877	$5,000,000	
Deere	Running back	820	$5,000,000	
Elzinga	Running back	701	$4,000,000	
Fuentes	Running back	689	$4,000,000	
			Total	
Quarterbacks: Pick 1		**Completion percentage**		
George	Quarterback	70.1	$24,000,000	
Hopkins	Quarterback	65.0	$7,000,000	
Im	Quarterback	62.3	$6,000,000	
Jefferson	Quarterback	59.9	$5,000,000	
Kerr	Quarterback	55.8	$5,000,000	
Loomis	Quarterback	53.4	$4,000,000	
			Total	
Receivers: Pick 2		**Receptions**		
Masters	Receiver	99	$16,000,000	
Nguyen	Receiver	61	$9,000,000	
Oliver	Receiver	45	$8,000,000	
Powell	Receiver	33	$6,000,000	
Quincy	Receiver	24	$3,000,000	
Rhea	Receiver	23	$2,000,000	
			Total	

Handout 2: Team Roster (page 3 of 3)

Name	Position	Stats (regular season)	Salary	Selected?
DEFENSIVE PLAYERS				
Safeties: Pick 2		**Interceptions**		
Smith	Safety	5	$14,000,000	
Tall	Safety	3	$8,000,000	
Udquim	Safety	2	$8,000,000	
Vennett	Safety	1	$7,000,000	
Wolla	Safety	1	$3,000,000	
Xiao	Safety	1	$2,000,000	
			Total	
Cornerbacks: Pick 2		**Tackles**		
Holmes	Cornerback	74	$13,000,000	
Bullard	Cornerback	65	$12,000,000	
Evans	Cornerback	56	$9,000,000	
Zhang	Cornerback	52	$8,000,000	
Meng	Cornerback	50	$7,000,000	
Gangal	Cornerback	48	$5,000,000	
			Total	
Linebackers: Pick 3		**Sacks**		
Allgood	Linebacker	15	$23,000,000	
Bertelsen	Linebacker	13	$19,000,000	
Chen	Linebacker	8	$16,000,000	
Gibson	Linebacker	7	$15,000,000	
Evans	Linebacker	6	$11,000,000	
Furman	Linebacker	5	$10,000,000	
Guo	Linebacker	4	$9,000,000	
Johnson	Linebacker	4	$8,000,000	
Suiter	Linebacker	2	$6,000,000	
			Total	
			TOTAL PAYROLL	

Handout 3—Assessment

Name: ____

Directions: Answer the following questions:

1. List two of the criteria required for a cartel to be successful.

2. How do economic incentives differ for a sports league cartel and the team owners?

3. Predict what might happen if professional football were left to a more competitive market.

4. Describe how a sports league cartel and the individual teams benefit one another.

Handout 3: Assessment—Answer Key

Answer the following questions:

1. List two of the criteria required for a cartel to be successful.
   - *Cartels must control output—members agree to the terms of the cartel.*
   - *Cartel members must produce a similar product.*
   - *Cartels must divide the market and establish production quotas.*
   - *Cartels must prevent cheating through rules.*

2. How do economic incentives differ for a sports league cartel and the team owners?

   Team owners want to field the best possible team, but the cartel wants the league to succeed. If a single team becomes too dominant, the league will not do as well and fans could lose interest, lowering collective profits.

3. Predict what might happen if professional football were left to a more competitive market.

   Answers will vary, but larger cities would likely have more teams. New locations might get teams as well. Teams would be able to spend more on payroll, possibly pushing less competitive teams out of the business. Additional leagues could form in areas with excess demand for football.

4. Describe how a sports league cartel and the individual teams benefit each other.

   Answers will vary but may include the following: Cartel rules keep teams somewhat evenly matched. The cartel maintains a team shortage, keeping ticket and merchandise prices higher than they would be in a more competitive market.

Standards and Benchmarks

National Standards in Economics

Standard 9: Competition among sellers usually lowers costs and prices, and encourages producers to produce what consumers are willing and able to buy. Competition among buyers increases prices and allocates goods and services to those people who are willing and able to pay the most for them.

- **Benchmark 2, Grade 12:** The level of competition in an industry is affected by the ease with which new producers can enter the industry, and by consumers' information about the availability, price and quantity of substitute goods and services.
- **Benchmark 4, Grade 12:** Collusion among buyers or sellers reduces the level of competition in a market. Collusion is more difficult in markets with large numbers of buyers and sellers.

Common Core State Standards: English Language Arts, Grades 9-12

- **Text Types and Purposes**

  CCSS.ELA-LITERACY.W.9-10.1: Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

    CCSS.ELA-LITERACY.W.9-10.1.A: Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among claim(s), counterclaims, reasons, and evidence.

  CCSS.ELA-LITERACY.W.11-12.1: Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

    CCSS.ELA-LITERACY.W.11-12.1.A: Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence.