Universität Zürich[UZH]

Department of Business Administration

Services & Operations Management

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Module Overview

1. Operations strategy
2. Process analytics
3. Quality management: SPC
4. Platform management
5. **Sports management**

Learning goals (1/2)

After this lecture you should

- know the increasing economic importance of sport
- be able to explain the economic peculiarities of sport
- understand the value creation process in sport
- understand the economic importance of competitive balance
- know how different measures work to promote competitive balance
- understand the economic logic of transfer restrictions
- understand the strategy of market rationing
- understand the business models of sports clubs

Learning goals (2/2)

- understand the root causes of corruption in sport
- know the WWE business model
- understand the economic incentives for betting manipulation
- understand the benefits of defining and enforcing ownership of sports results
- understand and optimize the trade-offs of brand-building and brand-selling in athlete´s brand management
- be able to develop optimal marketing strategies for athletes

World's 10 Largest Sports Leagues by Revenue

Rank	League	Revenue 2024 (in billion US$)
1	NFL	13.0
2	MLB	11.6
3	NBA	10.6
4	EPL	8.1
5	NHL	6.4
6	La Liga	6.1
7	Bundesliga	5.0
8	Serie A	3.2
9	Ligue 1	3.2
10	Formula One	3.2

Source: howmuch.net

The Formation of Sports Leagues (1/3)

- Barnstormers: Entrepreneurs set up professional teams and travel from city to city to play against other teams
- Rules are renegotiated from game to game
- New teams are constantly being formed as the attractiveness of a team rapidly declines when it was no longer unbeaten
- 1871 Foundation of the National Association of Professional Baseball Players
  - Cooperation between player advisors and representatives from 10 professional teams
  - Problem: there was no central authority to monitor the game plan, act against match-fixing and introduce transfer restrictions
  - Teams constantly organized "additional games"
  - In 1871, 3 teams claimed the championship

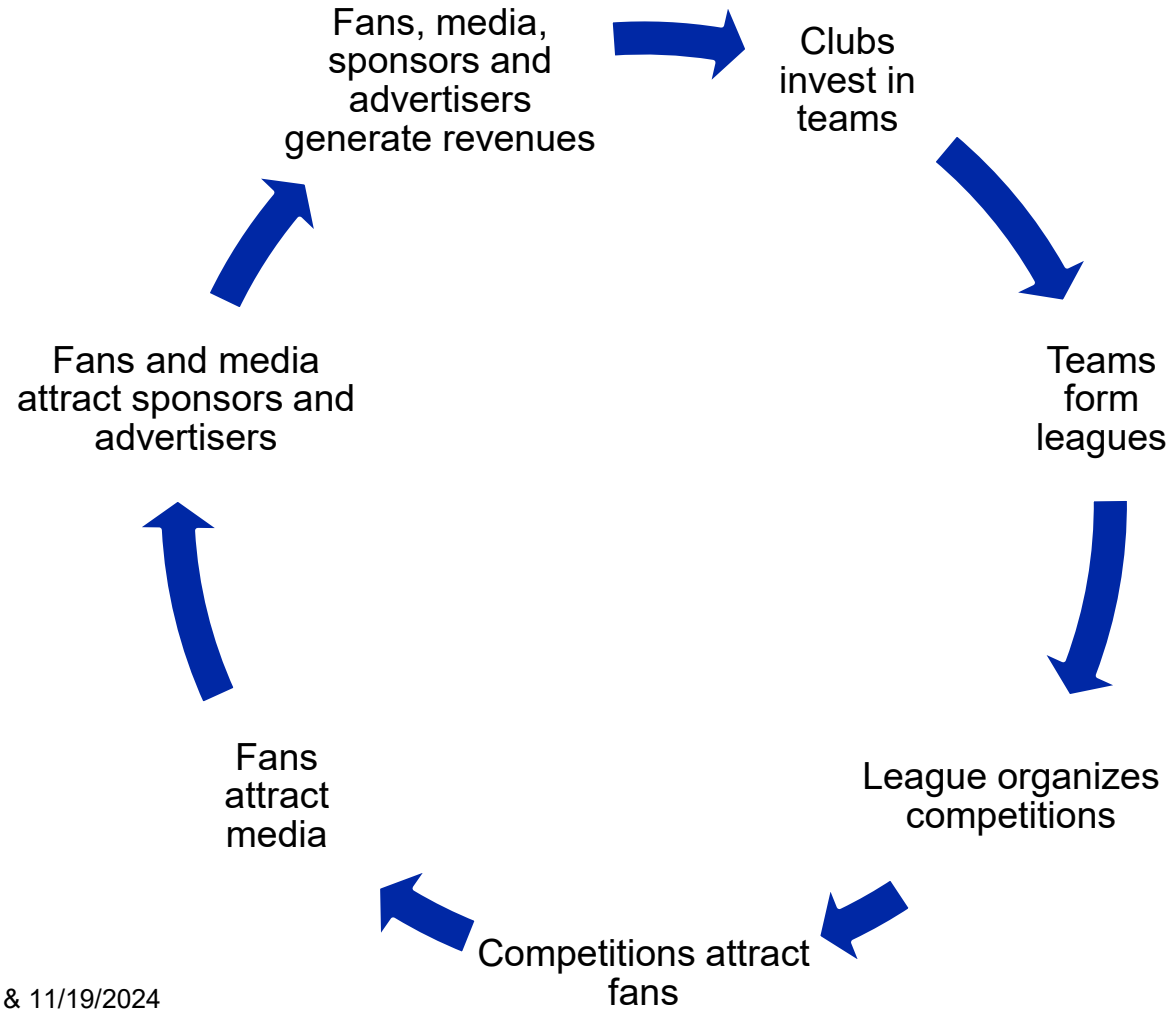
The Formation of Sports Leagues (2/3)

- 1876 Foundation of the National League
  - Cooperative association of team owners
  - Recognition of territorial rights
  - Promotion of competitive balance
  - No league expansion with weaker teams
  - Limitation of player salaries
  - League schedule
- 1919 Black Sox Scandal
  - 8 Chicago White Sox players manipulated the outcome of the World Series
  - Dramatic drop in audience numbers
  - => The league was close to bankruptcy

The Formation of Sports Leagues (3/3)

- "Enthronement" of Judge Kennesaw Mountain Landis as league commissioner
  - 7-year appointment
  - If the club owners could not agree on a successor after the end of the electoral term, the President of the USA had the right to appoint a successor
  - The league commissioner had full authority to investigate any matter that could harm the league
  - The league commissioner had unrestricted sanctioning power against players, clubs and officials
  - Club owners committed themselves to refrain from publicly criticizing Landis' decisions or challenging them in court
  - Landis made full use of his rights and restored the integrity of the league
  - Landis remained in office until his death in 1944

Value Creation (Circle) in Sports Leagues



Determinants of Value Creation

- Quality
  - Absolute Quality
    - E.g., number of goals scored, average speed…
  - Relative Quality/Competitive Balance
    - E.g., goal difference, distance between winner and loser…
  - Integrity/Fairness
    - E.g., fair play, doping, manipulation…
- Consumer capital
  - *De Gustibus Non Est Disputandum* (Stigler & Becker, 1977)
- Network effects
  - *Network Externalities, Competition, and Compatibility* (Katz & Shapiro, 1985)

Lord make us strong, but not too strong!

- Sporting versus economic competition
  - Real Madrid and FC Barcelona are competitors in sports
  - Economically, however, they are complementors
    - Real needs Barcelona (and Atletico, Valencia, Bilbao, etc.) to produce a marketable product (championship race)
    - In all other industries, companies usually benefit when their competitors are weak (e.g., Toyota)
- 3 types of competitive balance
  - Balance at the game level
  - Balance at the championship level
  - Balance over several seasons
- Perfect balance is usually not optimal
  - Big versus small clubs

Measures to Promote Competitive Balance

- Revenue Sharing
- Salary Caps
- Competitive Balance Tax
- Draft System
- Transfer Restrictions

Revenue Sharing

- Distribution of income from ticket sales, television rights, sponsorship and merchandising
  - Distribution principles: home team, sporting success, equal distribution
  - Closed versus open leagues
- Bundesliga (2023)
  - Average Top 6 (Positions 1-6): € 403.4 million–Average Bottom 6 (Positions 13-18): € 135.3 million (Source: DFL)
- NFL (2024)
  - Nr. 1 (Dallas Cowboys) US$ 1.2 billion, Nr. 16 (Tampa Bay Buccaneers) US$ 617 million, Nr. 32 (Cincinnati Bengals) US$ 549 million (Source: Forbes)
  - Average Top 6: US$ 779.17 million / Average Bottom 6: US$ 551.5 million

Swiss Super League

Club	Ticket Sales	Sponsorship	Broadcasting	Commercial	Total Revenue*
BSC Young Boys	28,007	12,610	29,122	12,549	**83,627**
FC Basel 1893	20,446	10,821	6,658	6,238	**47,545**
FC St.Gallen	11,329	7,962	2,705	5,507	**32,241**
FC Zürich	9,256	4,216	9,890	2,783	**29,881**
FC Lugano	2,221	2,242	4,155	952	**29,529**
FC Lausanne-Sport	2,309	10,756	1,501	3,751	**21,705**
FC Luzern	9,229	4,881	2,196	483	**21,067**
Grasshopper Club	2,191	1,976	2,032	745	**10,829**

* Total Revenue shown is operating revenue without player transfers (in thousands of Swiss Francs)
Source: Swiss Super League financial statement

Salary Caps

- Limitation of salary expenses (payroll) per team
  - NFL (Hard Cap): US$ 255.4 million for 2024
  - NBA (Soft Cap): US$ 140.588 million for 2024/25. Minimum team salary (90% salary cap) = US$ 126.529 million
    - Exceptions: e.g., Larry Bird Exception. Clubs may continue to (re-)sign star players at the maximum permitted salary even if this violates the cap
  - Other leagues with salary caps (examples)
    - Rugby: English Premiership, French Top 14, National Rugby League (Australia), Super Rugby (Australia)
    - Ice hockey: NHL, KHL
- Salary Floor
  - NFL (Hard Floor): 90% of the cap over a 4-year period

Competitive Balance (Luxury) Tax

- Teams are allowed to spend more than the cap, but they are "taxed" by the league
- "Tax revenue" is distributed within the league
- Example: MLB
  - Cap 2024: US$ 237 million
  - Tax rates:
    - 20% if the club was not above the cap in the previous year
    - 30% if the club was above the cap in the previous year
    - 50% if the club was above the cap in the previous two years or more

Draft System (1/2)

- Eliminate competition between teams for young players
- Reverse Order Picking
  - The worst team of the previous season is allowed to sign a young player first, then the second worst, and so on.
  - Problem: Incentive to lose games on purpose to improve draft position
- Draft Lottery
  - Lottery among the worst teams

Draft System (2/2)

- Percent chance of obtaining each draft pick in the NBA:

Seed	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14
1	14.0	13.4	12.8	12.0	47.9									
2	14.0	13.4	12.8	12.0	27.8	20.0								
3	14.0	13.4	12.8	12.0	14.8	26.0	7.0							
4	12.5	12.2	11.9	11.5	7.2	25.7	16.7	2.2						
5	10.5	10.5	10.6	10.5	2.2	19.6	26.7	8.7	0.6					
6	9.0	9.2	9.4	9.6		8.6	29.8	20.6	3.7	0.2				
7	7.5	7.8	8.1	8.5			19.7	34.1	12.9	1.3	0.0			
8	6.0	6.3	6.7	7.2				34.5	32.1	6.8	0.4	0.0		
9	4.5	4.8	5.2	5.7					50.7	25.9	3.0	0.1	0.0	
10	3.0	3.3	3.6	4.0						65.9	19.0	1.2	0.0	0.0
11	2.0	2.2	2.5	2.8							77.6	12.6	0.4	0.0
12	1.5	1.7	1.9	2.1								86.1	6.7	0.1
13	1.0	1.1	1.3	1.4									92.9	2.3
14	0.5	0.6	0.6	0.7										97.6

Transfer Restrictions

- Traditional: The club had the right to veto transfers (also for players whose contracts had already expired)
- Rottenberg (1956): Invariance principle
- Dietl, Franck, and Lang 2008: Insurance argument
  - The future athletic performance of a player cannot be perfectly predicted
  - Players are risk averse
  - Club can insure players against unexpected fluctuations in income
  - Prerequisite: "good" risks do not move to another club without compensation

Bosman Ruling

- Jean-Marc Bosman was denied permission for a free transfer from his previous club, RFC Liège, to the French second division club USL Dunkirk by the Belgian Association
- Bosman sued and won both instances in Belgium
- The Belgian appeal court forwarded the case to the European Court of Justice (ECJ)
- The ECJ declared the traditional transfer law to be unlawful:
  - Clubs cannot charge transfer fees for players whose contracts expired
  - Additionally, the ECJ declares the restrictions on foreigners to be unlawful

Consequences of the Bosman Ruling

- Increase in the average contract duration by 20% or 6 months (Antonioni & Cubbin, 2000; Hübl & Swieter, 2002)
  - Players and clubs wanted to go back to the old system
- Creation of a global player market
  - Increase of foreigners
  - Uniform "world" price for player talent
- “Product” Markets remain closed
  - For example, FC Basel has no access to the English market
    - UEFA 2020/21 CL market pool: England € 218.7 million, Switzerland € 8.45 million
- “Discrimination” of smaller markets and their leagues
  - Only teams from large markets can win the CL

Market Rationing

- Why was there no NFL team in Los Angeles for a long time?
- The 5 largest metropolitan areas in the US (in million)*
  - New York-Newark 22.5
  - Los Angeles-Long Beach 18.6
  - Washington-Baltimore-Arlington 9.9
  - Chicago-Naperville 9.8
  - San Jose-San Francisco-Oakland 9.7

*Source: Combined statistical areas (CSAs)
Population as of July 1, 2020 (the United States Census Bureau estimates)

- Market rationing increases bargaining power

Background (1/2): “A rising tide lifts all boats”

- A city wants to build a new airport. The willingness to pay is 1 billion. There are 2 construction consortia, each of which can only build one airport. One consortium has construction costs of 800 million and the other consortium has construction costs of 700 million.
- Which consortium is awarded the contract and at what price?
- What happens if there are two cities that each want to build an airport?
- What happens if there are three cities?

Background (2/2): Nintendo Example

- Nintendo had a market capitalization of 2.4 trillion yen (Sony 2.2 trillion yen, Nissan 2.0 trillion yen) between 1990 and 1991, although the value added from video games is certainly less than that of electronics or cars.
- Additionally, Nintendo was exposed to a high customer concentration (Wal-Mart, Toys R Us)
- How was this possible?

World's Most Valuable Sports Clubs 2024

Rank	Team	Sport	League	Value (USD billion)
1	Dallas Cowboys	Football	NFL	10.32
2	Golden State Warriors	Basketball	NBA	8.28
3	New York Yankees	Baseball	MLB	7.93
4	Los Angeles Rams	Football	NFL	7.79
5	New York Giants	Football	NFL	7.65
6	New York Knicks	Basketball	NBA	7.43
7	Los Angeles Lakers	Basketball	NBA	7.34
8	New England Patriots	Football	NFL	7.31
9	San Francisco 49ers	Football	NFL	6.86
10	New York Jets	Football	NFL	6.80
17	Manchester United	Football	EPL	6.20

Source: Sportico

Sources of Income

- Match day (mainly ticket revenues)
- Media rights (mainly television rights)
  - Individual vs. collective sales
- Sponsorship
  - For example, FC Barcelona's newest deal:
    - Nike $ 1.82 billion over 14 seasons
- Merchandising
  - Beckham, Messi
- Transfers
  - Small market teams (e.g., Boca Juniors, FC Basel)

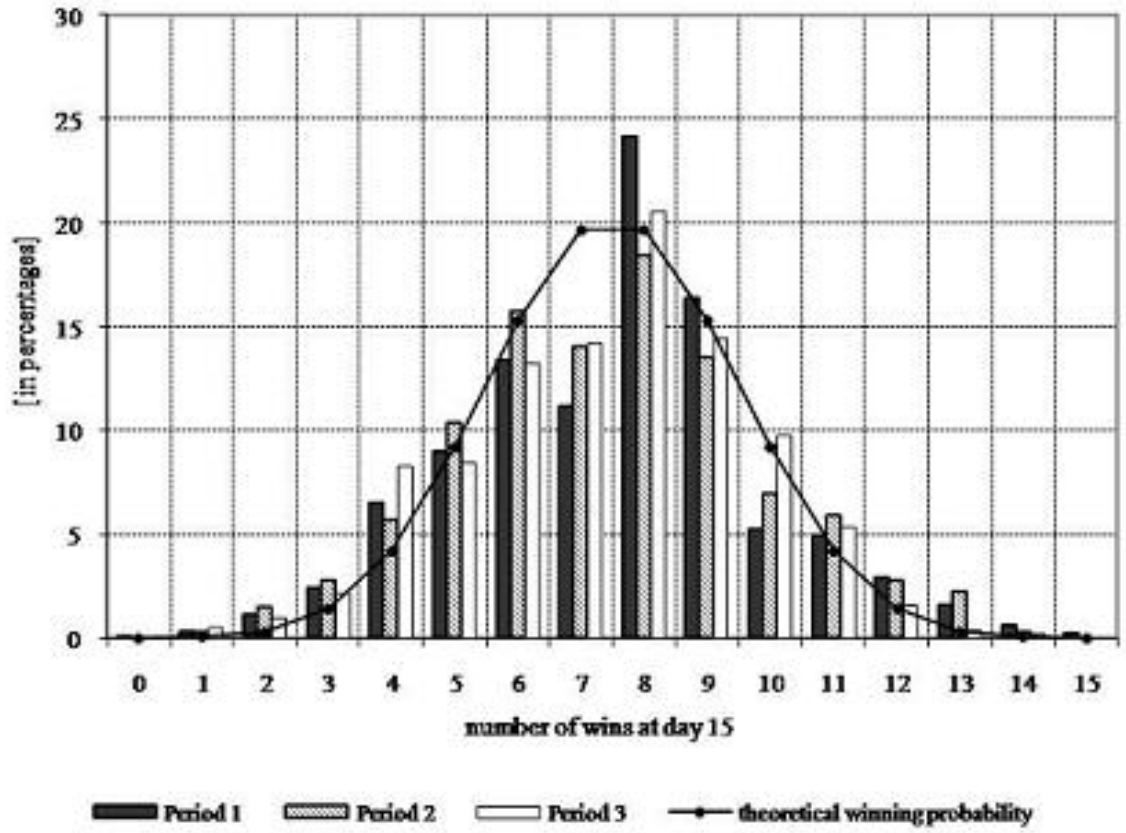
Sports Club Strategies

- FC Barcelona: Més que un club
  - Founded on November 29th, 1899 by the Swiss Hans Gamper
  - Association as a social institution
  - Symbol of democracy, independence and human rights
  - Offensive football
  - 107 years of no jersey advertising
    - 2006: UNICEF, 2011: Qatar Foundation, 2013: Qatar Airways, 2016: Rakuten, 2022: Spotify (including naming rights to Camp Nou)
- Real Madrid: Los galácticos
- Manchester United: Theatre of Dreams
- Dallas Cowboys: America's Team

Corruption in Sports (1/4)

- Duggan and Levitt (2002)
- Dietl, Lang, and Werner (2010)
  - 33,734 fights between January 1995 and November 2006
  - 283 wrestlers
  - 3 Periods
    - January 1995 to January 2000 (before Duggan & Levitt)
    - March 2000 to May 2003 (increased media interest)
    - July 2003 to November 2006 (decreased media interest)
  - Period 1
    - Normal frequency for 7 or 8 wins, 19.6% each
    - We find 24% with 8 wins and 12% with 7 wins from January 1995 to January 2000 (Duggan and Levitt find 26% with 8 wins, 12.2% with 7 wins for the period from January 1989 until January 2000)
  - Normalization in Period 2, rebound in Period 3

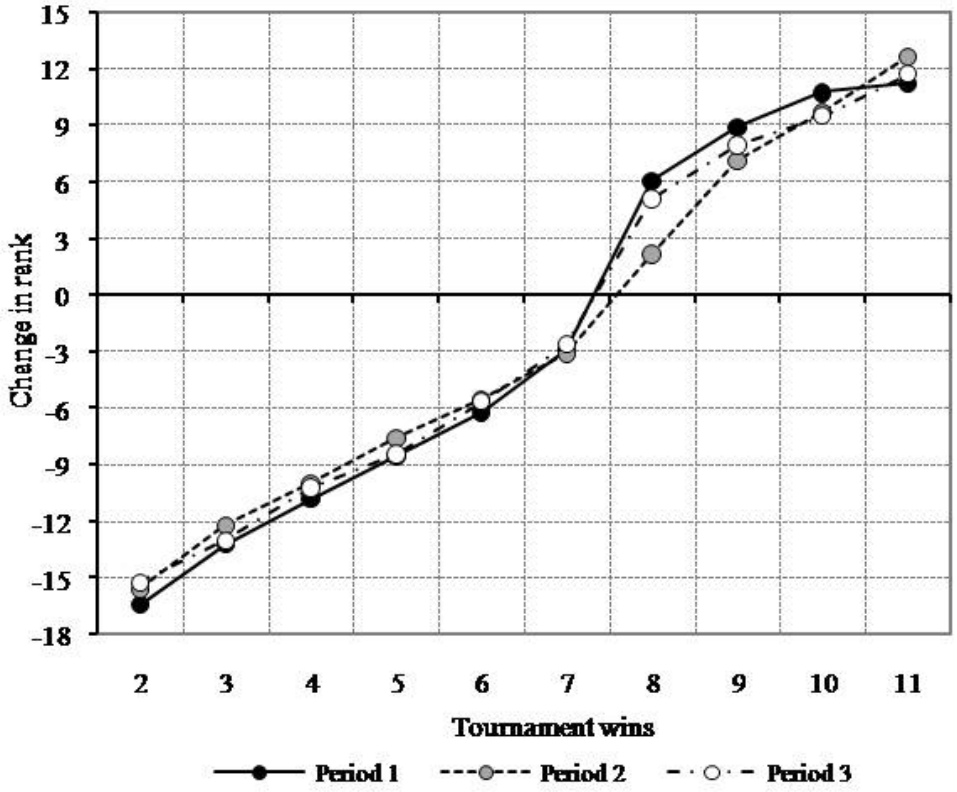
Corruption in Sports (2/4)



Corruption in Sports (3/4)

- Duggan and Levitt (2002) identified a non-linearity feature in the incentive system
  - Except for the 8th win, each win is worth about 3 positions in the rank
  - 8th win brings almost three times as much
  - Potential for “trading” wins
- Wrestlers lose disproportionately often in the next fight against the same opponent against whom they won their 8th victory
- Non-linearity disappears in Period 2, but reappears in Period 3
- Alternative explanation: motivation

Corruption in Sports (4/4)



TKO Group Holdings

- Media conglomerate created by Endeavor as part of a merger between World Wrestling Entertainment, Inc. (WWE) and Zuffa, the parent company of the Ultimate Fighting Championship (UFC) in 2023
- Publicly listed (NYSE), current market capitalization $ 9.47 billion (November 2024)
- App. 1250 full-time employees, total revenue $ 1.67 billion (2023)
- Operating income $ 446.7 million (2023)
- Wrestling (WWE)
  - "Competitions" (shows) are exclusively entertainment-oriented and follow a script
  - Wrestlers are well-trained and highly motivated athletes or stuntmen who have signed incentive-based contracts with WWE as independent entrepreneurs
    - ➢ Compensation of wrestlers depends on the popularity of the character they impersonate and the sales of that character's merchandising products

Wrestlemania

- Top Event: Wrestlemania
  - Since 1985
  - 6th position among the most valuable sports brands according to Forbes (behind Superbowl, Summer Olympic Games, NCAA Men's Final Four, FIFA World Cup, College Football Playoffs)
  - Wrestlemania 40, April 6 and 7, 2024
    - Lincoln Financial Field, Philadelphia, Pennsylvania
    - Attendance: 120,239 spectators (2 nights combined), $38.5 million in revenue
    - Wrestlemania 39: 134,856 spectators, $ 21.6 million revenue
    - Wrestlemania 38: 156,352 spectators, $ 17 million revenue
    - Wrestlemania 37: 51,350 spectators, $ 10 million revenue

“Sport” Is Murder (1/3)

- Wrestlemania 6 (1990)
  - Skydome, Toronto, 67678 spectators
  - Main fight: Ultimate Warrior "defeats" Hulk Hogan and becomes world champion
  - The Ultimate Warrior (James Brian Hellwig) weighed 118 kg at the time, was 188 cm tall and had a minimal fat percentage
  - On April 8, 2014, James Brian Hellwig collapsed on the way to his car. He was immediately taken to the hospital, where doctors only could certify his death. The autopsy found a heart attack to be the cause of death. The Warrior was 54 years old
- The fate of the warrior is not an isolated incident!

"Sport" Is Murder (2/3)

- For example, more than a third of the wrestlers who took part in Wrestlemania 10 in Madison Square Garden in 1994 were already dead in 2014
  - Owen Hart died in 1999 at the age of 34 after the fuse came off when he was supposed to float into the ring from the ceiling of the Kemper Arena in Kansas City. Hart fell directly onto the ring floor from a height of 24 meters and succumbed to his internal injuries after a few minutes.
  - Bam Bam Bigelow died in 2007 at the age of 45 from an overdose of cocaine and benzodiazepine. He also suffered from heart and back problems.
  - Luna Vachon died in 2010 at the age of 48 from an overdose of oxycodone and benzodiazepine after long-term drug addiction.
  - Doink the Clown (Matt Osborne) died in 2013 at the age of 55 from an overdose of morphine and hydrocodone. His heart problems also contributed to his death.

“Sport” Is Murder (3/3)

- Randy "The Macho Man" Savage (Randall Poffo) died in 2011 at the age of 48 after suffering a heart attack and crashing into a tree while driving his car. According to the autopsy report, the heart attack was triggered by an enlarged heart and severe arterial constriction.
- Crush (Brian Adams) died in 2007 at the age of 43 from an overdose of analgesics and anti-depressants. It is also speculated that he took nandrolone, testosterone and somatotropin.
- Mabel (Nelson Frazier) died in 2014 at the age of 43 from complications from a heart attack. Yokozuna (Rodney Anoa) died of pulmonary edema in 2000 at the age of 34.
- Mr. Perfect (Curt Hennig) died of a cocaine overdose in 2003 at the age of 44. His father also blamed steroids and painkillers for his son's death.
- Earthquake (John Tenta) died of bladder cancer in 2006 at the age of 42.

Betting manipulation (1/2)

- Originally, professional footballers in England used the betting markets to "hedge" their income
  - The first professional soccer players in England were financially rewarded for wins
  - Problem: no income in case of a loss
  - Players hedged themselves by placing bets that their team will lose
  - => secure income
- Growth of the betting markets
- Problem: If betting revenue > sport revenue => incentive to manipulate
- Betting providers as free riders (no compensation for the use of the sports platform)

Betting manipulation (2/2)

- Possible solution: Definition and enforcement of property rights to sports results (Dietl & Weingärtner, 2014)
  - Offering bets without a license from the relevant sport becomes illegal
    - Compensation for sport
    - Distinction between legal (licensed) and illegal (unlicensed) betting providers
    - Possible sanctions by sports associations

The Highest-Paid Athletes in 2024 (in US$ million)

Rank	Name	Sport	Total Earnings	On-Field Salary	Off-Field
1	Cristiano Ronaldo	Soccer	$260 M	$200 M	$60 M
2	Jon Rahm	Golf	$218 M	$198 M	$20 M
3	Lionel Messi	Soccer	$135 M	$65 M	$70 M
4	LeBron James	Basketball	$128.2 M	$48.2 M	$80 M
5	Giannis Antetokounmpo	Basketball	$111 M	$46 M	$65 M
6	Kylian Mbappé	Soccer	$110 M	$90 M	$20 M
7	Neymar	Soccer	$108 M	$80 M	$28 M
8	Karim Benzema	Soccer	$106 M	$100 M	$6 M
9	Stephen Curry	Basketball	$102 M	$52 M	$50 M
10	Lamar Jackson	Football	$100.5 M	$98.5 M	$2 M

Source: Forbes

Highest-Paid Athletes of All Time (in US$ billion)

Rank	Athlete	Country	Sport	Turned Pro	Inflation Adjusted Earnings (billion US$)
1	Michael Jordan	United States	Basketball	1984	3.75
2	Tiger Woods	United States	Golf	1996	2.66
3	Cristiano Ronaldo	Portugal	Soccer	2002	1.92
4	Arnold Palmer	United States	Golf	1954	1.76
5	LeBron James	United States	Basketball	2003	1.70
6	Jack Nicklaus	United States	Golf	1961	1.67
6	Lionel Messi	Argentina	Soccer	2004	1.67
8	David Beckham	England	Soccer	1992	1.50
9	Roger Federer	Switzerland	Tennis	1998	1.49
10	Floyd Mayweather	United States	Boxing	1996	1.48

Source: Sportico (as of 2023)

Highest-Paid Athlete of All Time: Gaius Appuleius Diocles (Peter Struck)

- Most successful charioteer in ancient Rome, born 104 A.D. in Lamecum (today Lamego, Portugal)
- Chariot races were the most popular spectacle; ahead of gladiator fights and amphitheater sea battles
  - Chariot races are for 7 laps with 4 or 6 horses each / approx. 250'000 spectators per week in the Circus Maximus
- Gaius Appuleius Diocles took part in 4'257 races and won 1'462 of them
- He won a total of 35'863'120 sesterces in prize money
  - Enough to supply Rome with grain for a year
    - 1/5 of the annual wages of all Roman soldiers
    - According to Peter Struck, this corresponds to approximately US$ 15 billion today

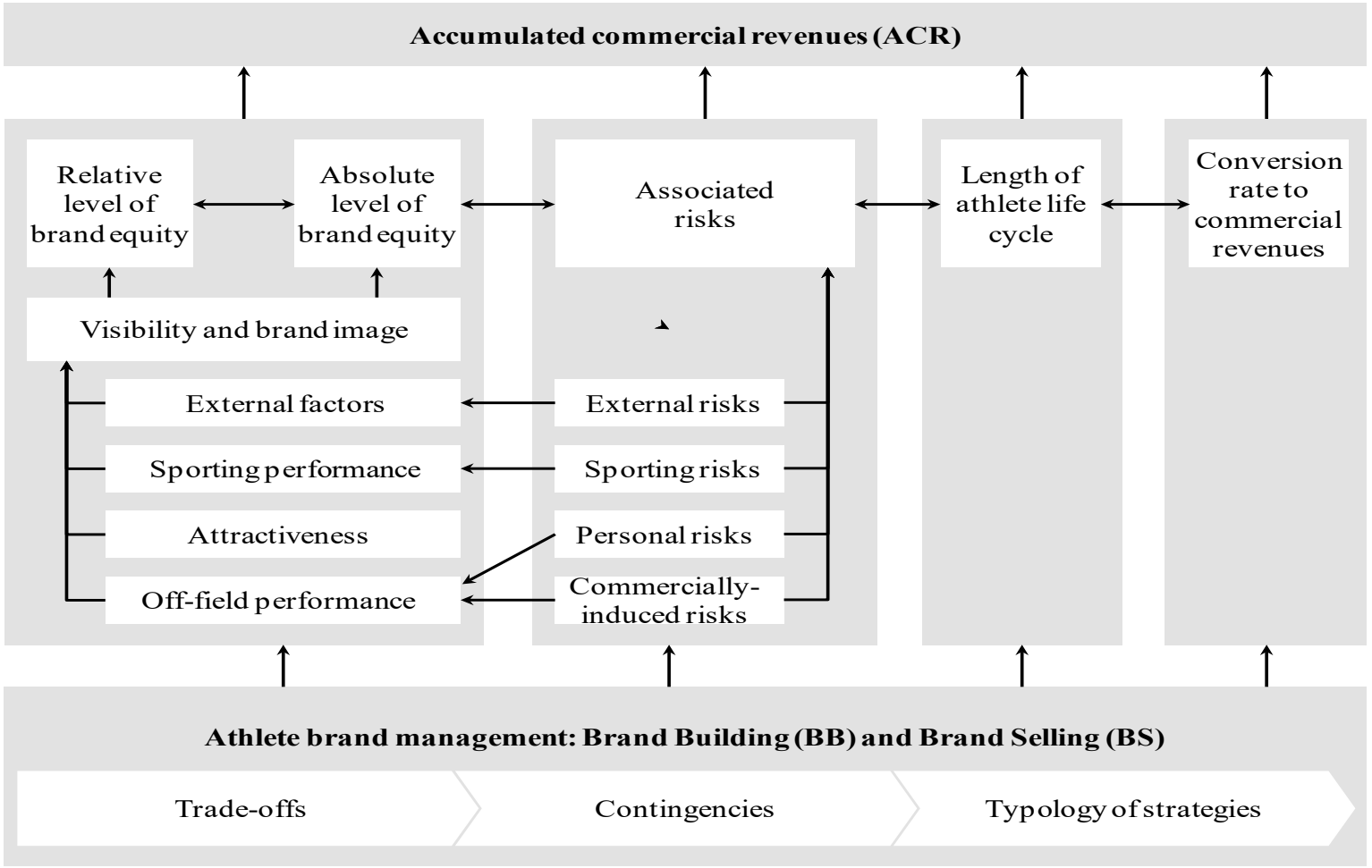
Athlete Brand Management

- Life cycle of athletes
  - Start, Rise, Peak, Decline, Post-Retirement
- Determinants of advertising revenue
  - Brand value of athletes
    - Sporting success
    - Attractiveness (e.g., Beckham, Sharapova)
    - Social success
  - Risks
    - External risks (loss of popularity of the sport and / or team, e.g., sumo)
    - Sporting risks (injury, illness)
    - Personal risks (Tiger Woods, Maria Sharapova, Lance Armstrong, Oscar Pistorius)
    - Advertising risks

Advertising Risks

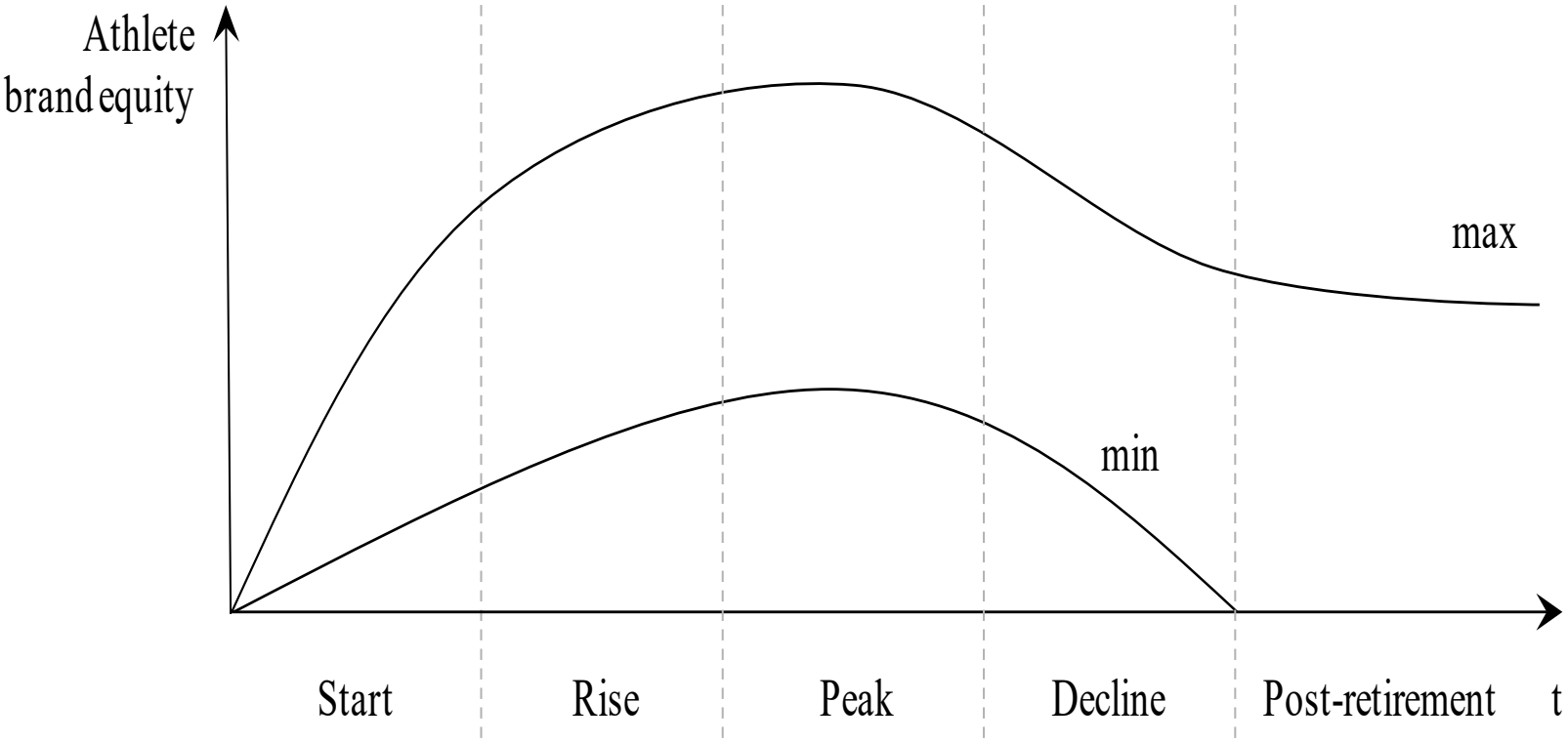
- Negative product or company connotations
  - Risk of negative image for the athlete (e.g., tobacco, alcohol, British Petroleum)
- Advertise too many products at the same time
  - Risk of overexposure
- Close bond between the athlete and the product
  - Limited range of options for further advertising contracts
- Misfit between product/company and athlete
  - Negative effect on athlete's brand value and on the product/company

Frame of Reference for Maximizing ACR



Source: Schweizer and Dietl (2015)

Brand Value of Athletes (according to Schweizer & Dietl, 2015)



Trade-Off Between Brand Building and Brand Selling

- Brand building
  - Activities that increase the athlete's brand value
    - Brand building through sport
    - Brand building through social engagement
    - Brand building through the choice of suitable advertising partners
- Brand selling
  - Activities that reduce the athlete's brand value
  - Activities with high advertising risks
  - Tendency to higher advertising revenues than brand building
- Goal: Optimal balance between brand building and brand selling during the life cycle

Trade-Off Between Brand Building and Brand Selling

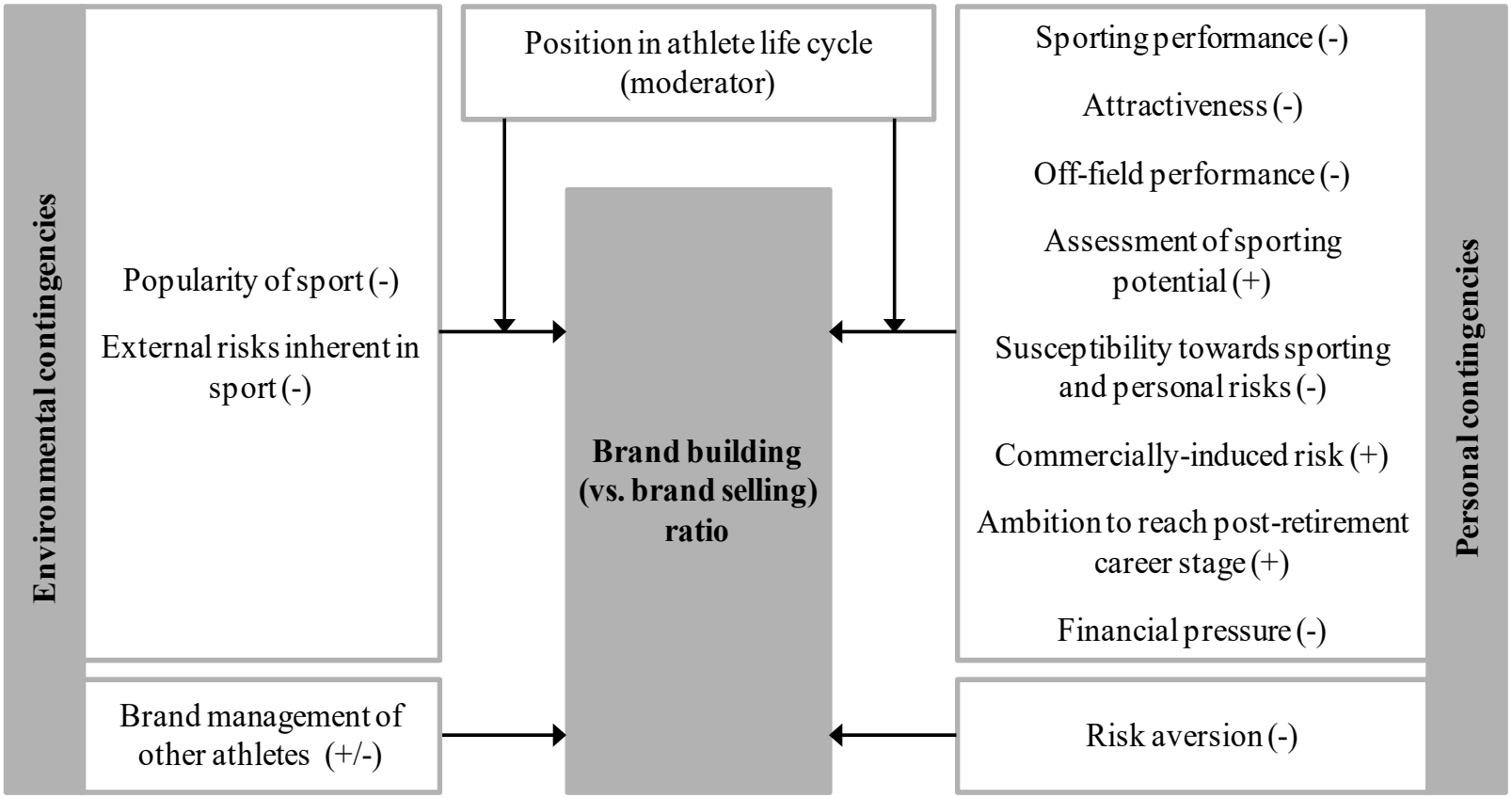
Focus of commercial agreements		Effects on ACR via... Brand equity	Risks	Length of life cycle	Conversion to revenues	
	Brand Building (BB)	**positive**, increases absolute & relative brand equity	**neutral to positive**, keeps constant or reduces commercially-induced risks	**positive**, prolongs commercially relevant time span	**negative**, postpones revenues generation to the future	**Long-term focus, "expensive" and requires long-term care**
	Brand Selling (BS)	**negative**, reduces absolute & relative brand equity	**negative**, increases commercially-induced risks	**negative**, shortens commercially relevant time span	**positive**, leverages brand equity to generate revenues today	**Short-term focus, sacrifices long-term opportunities**

Source: Schweizer and Dietl (2015)

Determinants for the Optimal Mix of Brand Building and Brand Selling

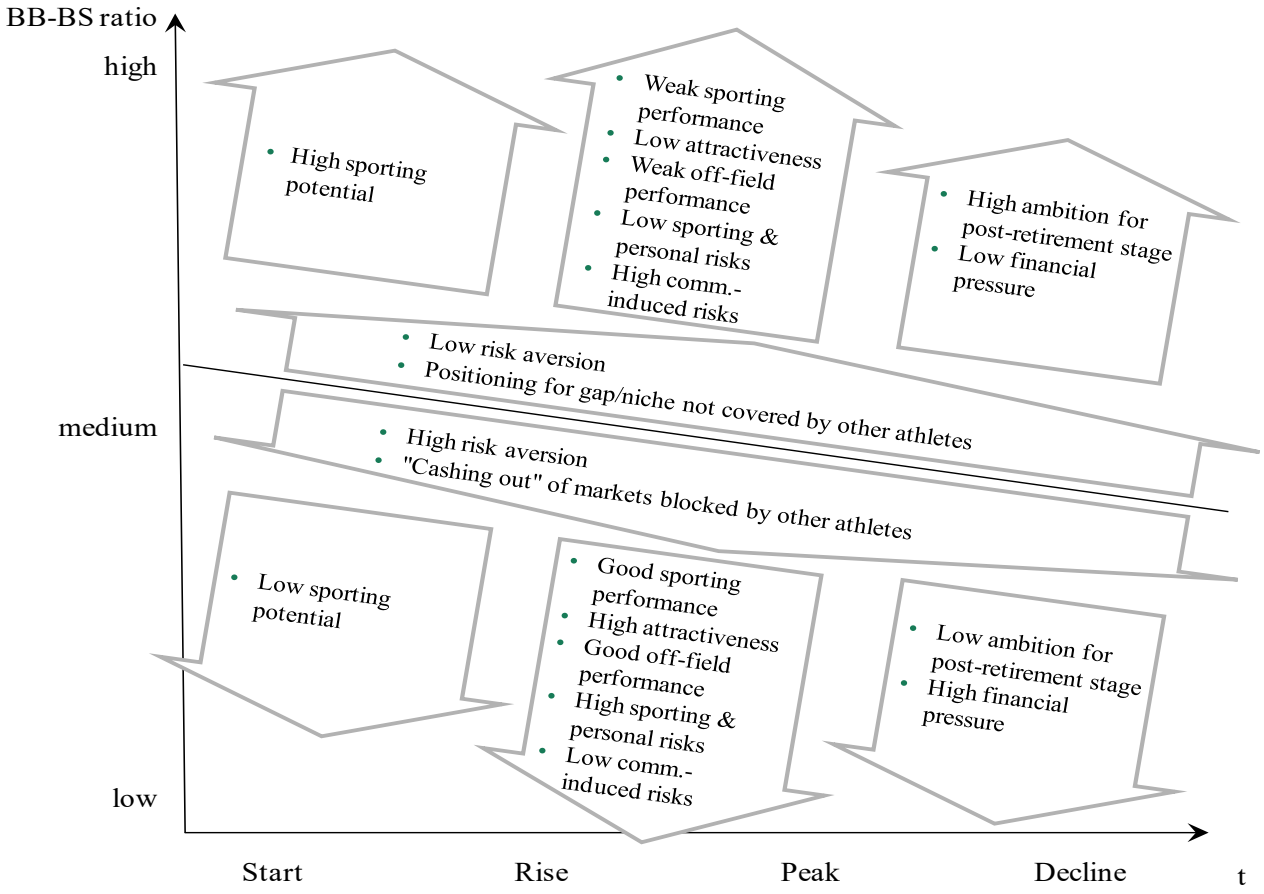
- Phase in the life cycle
- Athlete's brand equity
- External, sporting, personal and advertising risks
- Athlete's risk aversion
- Ambitions for a post-retirement career
- Athlete's financial situation

Determinants for the Optimal Marketing Strategy



Source: Schweizer and Dietl (2015)

Influencing Factors of the Marketing Strategy



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