

Bracketology: A Chimpanzee, A Dart, and A Wise Investment?

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Motivation – By the Numbers

- Up to \$3.5 billion in illegal gambling year⁻¹
- \$1-1.4 billion loss in productivity
 - \$9.3 million per minute in 2005
- \$41.1 million economic impact in host city
- \$6 billion paid for the right to broadcast
- Standing-room-only crowds in Las Vegas
 - Every hotel room booked for months

Motivation – Betting Behavior

- Eenie-meenie-minie-moe
- Oklahoma!
- Mason-Dixon Line
- “At 175-to-1 odds, you got to go for it.”
- Randomization

Introduction

- 64 team single-elimination tournament
- Four regions – each with seeds 1-16
- Sum of the two highest possible seeds in each game is a constant in each round
- 4 regional winners create the Final Four
- The best teams play:
 - The worst teams
 - The most games

1				
16	1			
8		1		
9	8			
5			1	
12	5			
4		4		
13	4			
6				1
11	6			
3		3		
14	3			
7			2	
10	7			
2		2		
15	2			

Literature and Behavioral Economics

- Betting on Lowest Seeds
 - Conformity
 - Favorite-Longshot Bias
 - “At 175-to-1 odds, you got to go for it.”
 - Preferences
 - Risk Aversion
- Investor Sentiment (Avery and Chevalier)
 - Expert Opinion
 - Prestige
- Predicting an uncertain outcome
 - Normative Model

Historical Outcomes

- 1537 Games from 1979-2004
 - Accuracy is stable b/w tournament years
- Accuracy increases with seed difference
 - Accuracy decreases as round increases
 - Accuracy decreases when high seed increases
 - Accuracy increases when low seed increases

Methodology

- Office pool
- No ante
- Winner receives \$50 cash
- Track predictions online
- **BETTER INFORMATION SHEET**

Better Information Sheet

- Demographics
 - Gender
 - College Status
 - Home
- Sentiment
 - Favorite Team and Conference
 - Hated Team and Conference
- Knowledge
 - Know which team are prestigious
 - Follow college basketball

Better Demographics

- Overwhelmingly male
- Overwhelmingly students
- Majority from Northeast
- Distribution of knowledge

Betting Behavior – Descriptive Statistics

- Overbet on high seeds
- Graduate students bet conservatively
- Bet for favorite teams
- Bet for teams affiliated with favorite conf
- DO NOT bet for or against hated team
- Bet for teams affiliated with hated conf

Estimation of Betting Behavior

Variable	Coef.	Std. Err.
		Chi-Square
Male	0.11826	(0.10129)
Year FIXED	YES***	(0.0028)
Region FIXED	YES	(0.1418)
High Seed is Bettor's Favorite Team	0.46397**	(0.20850)
Low Seed is Bettor's Favorite Team	-0.69520***	(0.20199)
High Seed is Element of Bettor's Favorite Conf	0.31478***	(0.10467)
Low Seed is Element of Bettor's Favorite Conf	-0.20971**	(0.09923)
High Seed is Element of Bettor's Hated Conf	-0.11981	(0.10611)
Low Seed is Element of Bettor's Hated Conf	-0.28559**	(0.12151)
Prestige FIXED	YES***	(0.0000)
Following FIXED	YES	(0.6039)
High Seed FIXED	YES***	(0.0000)
Low Seed FIXED	YES***	(0.0000)
Seed Difference Times Low Seed	-0.00458	(0.00926)
Presence FIXED	YES**	
Observations	3212	
Pseudo R ²	0.1829	

Winning A Bet

Variable	Coef.	Std. Err.
		Chi-Square
Male	0.11359	(0.09512)
Year FIXED	YES***	(0.0046)
Region FIXED	YES	(0.1400)
High Seed is Bettor's Favorite Team	-0.37964**	(0.15944)
Low Seed is Bettor's Favorite Team	-0.42243*	(0.22163)
High Seed is Element of Bettor's Favorite Conf	-0.11546	(0.08871)
Low Seed is Element of Bettor's Favorite Conf	-0.28429***	(0.10038)
High Seed is Element of Bettor's Hated Conf	-0.27071***	(0.09820)
Low Seed is Element of Bettor's Hated Conf	-0.37135***	(0.12124)
Prestige FIXED	YES*	(0.0589)
Following FIXED	YES**	(0.0285)
High Seed FIXED	YES***	(0.0000)
Low Seed FIXED	YES***	(0.0000)
Seed Difference Times Low Seed	-0.00458	(0.00926)
Presence FIXED	YES	(0.1715)
Observations	3213	
Pseudo R ²	0.2193	

Conclusions

- Bettors are risk adverse
- Participants bet on positive sentiment
 - Favorite team and favorite conf
- Didn't bet against negative sentiment
 - Hated team and hated conf
- Most predicted brackets did worse than the bracket predicted by choosing the highest seed in every game