

The drier edge of college football

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College football teams from areas with drier climates might have an advantage when competing in wetter environments. Credit: Jayel Aheram

College football betting markets show a statistically significant bias against home teams from arid regions who host teams from wetter environments, researchers from Kansas State University found.

After reviewing seven years of point spreads -- referring to the margin of victory expected of the favored team -- and game scores, [economist Daniel Kuester](#) found that the point spreads overestimated the performance of visiting teams.

When teams from relatively wet climates traveled to drier locations to play, Kuester's study showed that wagers on the host team would have won about 57 percent of the time.

That may not sound striking, but most analysis of betting markets variables will reveal no such bias. Evaluating the outcome based on any one variable typically results in wins between 48-52 percent of the time. Sustained profit opportunities are very rare.

This doesn't mean that sports books -- organizations that set the point spreads and pay out winning wagers -- lost a ton of money, however, because they usually make their money on commission and profit as long as bets come in at roughly equal levels on both sides. But it does suggest that a lot of bettors could have been placing losing bets.

Kuester called this situation an inefficient market, in which bettors could bet on one side of a wager -- arid home teams -- every time and win consistently. Usually the point spread adjusts in response to factors that impact a game's outcome.

"We don't think of aridity as something that might stand out when people are thinking about betting on the game or looking at the different factors that might influence the game," said Kuester.

There were 399 total games in Kuester's sample and he said that an \$11 bet on every game over that seven year period would have resulted in a profit of \$357.

The cause of this betting market blip is uncertain. Before investigating the data, Kuester believed that if he turned up any bias, it would trend in the opposite direction.

"The traditional way of thinking about it is the expectation that people who traveled from arid areas to humid areas would have a real disadvantage," Kuester said. "What we found is the disadvantage is most pronounced when the teams from the humid areas travel to the arid areas."

There are plausible reasons that athletes might suffer moderate performance declines in drier environments, said William O. Roberts, a professor of family medicine and community health at the University of Minnesota in Minneapolis, and a past president at the American College of Sports Medicine.

Roberts said athletes might underestimate their need for hydration, which could inhibit their performance. He thought the most important factor to consider was whether or not athletes remain as well hydrated when in arid areas as they do in wet areas.

"[The athletes] may not notice their fluid losses as much as they do where it's humid and the sweat rolls on the skin more," said Roberts. "Maybe people from more humid areas are used to having sweat run down them as a reminder to drink."

Roberts said that before this factor could be conclusively proved as the most crucial to performance, many other factors should be weighed such as altitude, temperature, direction and distance of travel and more.

"Or, [Kuester's study] could just be a statistical fluke, I don't know," said Roberts.

Without further study, Kuester can't be sure either. He originally considered games for the seven seasons from 2000-06 and is planning to review the data from the four most recent seasons at the end of the 2010 season for evidence of continued bias.

What happens when an economist researches a problem and finds a chance to profit? In other words, did Kuester consider cashing in his academic career for a chance at Vegas glory?

"I guess the thought crossed my mind but I'm a bit more risk averse than

that," Kuester said.

"It's not so much a get rich quick scheme," admitted Kuester, but noted that in today's economy "an eight percent return on investment looks pretty good."

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