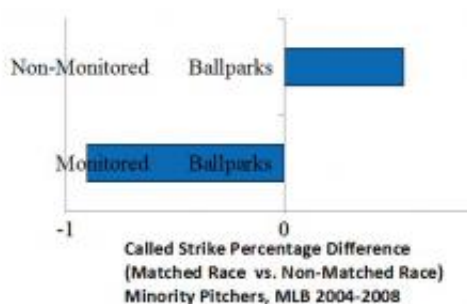


# White favoritism by Major League umpers lowers minority pitcher performance, pay

September 7 2011, By Margaret Allen



In non-monitored ballparks, minority pitchers facing matched-race umpires will have 0.63% higher called strike probability than if they face non-matched-race umpires. In monitored ballparks, this effect is reversed: minority pitchers facing matched-race umpires will have 1.03% LOWER called strike probability than if they face non-matched-race umpires. Credit: Sulaeman

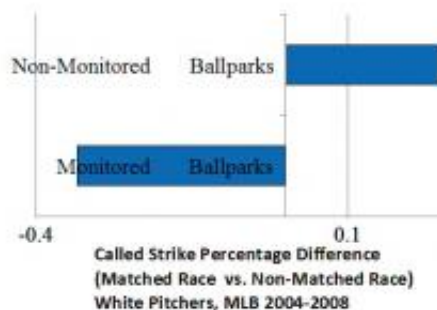
When it comes to Major League Baseball's pitchers, the more strikes, the better. But what if white umpires call strikes more often for white pitchers than for minority pitchers?

New [research findings](#) provide an answer. Analysis of 3.5 million pitches from 2004 to 2008 found that minority pitchers scale back their performance to overcome racial/ethnic favoritism toward whites by MLB home plate umpires, said economist Johan Sulaeman, a financial economist at Southern Methodist University in Dallas and a study author.

The study found that minority pitchers reacted to umpire bias by playing it safe with the pitches they throw in a way that actually harmed their performance and statistics, said Sulaeman, a labor and discrimination expert.

Specifically, minority pitchers limited the umpires' discretion to call their pitch a "ball" by throwing squarely across the plate in the strike zone more often. Unfortunately for the pitcher, such throws are also easier for batters to hit.

The finding builds on an earlier study that discovered Major League Baseball's home plate umpires called strikes more often for pitchers in their same ethnic group — except when the plate was electronically monitored by cameras, Sulaeman said.



In non-monitored ballparks, white pitchers facing matched-race umpires will have 0.25% higher called strike probability than if they face non-matched-race umpires. In monitored ballparks, white pitchers facing matched-race umpires will have .33% lower called strike probability than if they face non-matched-race umpires. Credit: Sulaeman

While the earlier finding surprised the researchers, they said, the latest

results are even more surprising.

Since most MLB umpires are white, the overall effect is that umpire bias pushes performance measures of minorities downward, said Sulaeman, an expert in labor economics and discrimination.

The findings have important implications for measuring the extent of discrimination not only in baseball, but also in labor markets generally, say the authors.

"In MLB, as in so many other fields of endeavor, power belongs disproportionately to members of the majority — white — group," the authors write.

## **Findings draw on analysis of pitching in QuesTec-monitored parks**

Sulaeman and his co-authors analyzed 3.5 million pitches by [Major League Baseball](#) pitchers from 2004 to 2008. All parks are now monitored, but during those four years about one-third of major league ballparks were monitored with computers and cameras to check the accuracy of the umpires' ball and strike calls.

Four cameras tracked and recorded the location of each pitch, with umpires and pitchers aware that QuesTec was the primary mechanism for gauging umpire performance. MLB considers an ump's performance sub-standard if more than 10 percent of his calls differ from QuesTec.

Of the 3.5 million pitches, umpire and pitcher were the same race — usually white — for about two-thirds of the 1.89 million pitches that were called strikes or balls. About 89 percent of umpires and 70 percent of pitchers were white.

The researchers looked not only at the race of umpires, pitchers and batters, but also: effects for each pitcher, umpire and batter; presence or absence of QuesTec; importance of the at-bat; when the pitch would terminate the at-bat; whether the pitch came early or later in the game; importance of the game; racial demographics of the neighborhood around the park; umpire age and experience; pitch characteristics, including horizontal pitch distance and pitch height; and whether the throw was a fastball, curveball, slider or cutter.

The study controlled for inning, pitch count, pitcher score advantage and whether the pitcher was playing at home or visiting.

The study, "[Strike Three: Discrimination, Incentives, and Evaluation](#)," is published in the current issue of the scholarly journal [The American Economic Review](#).

In addition to Sulaeman, co-authors were Christopher A. Parsons, University of North Carolina at Chapel Hill; Michael C. Yates, Auburn University; and Daniel S. Hamermesh, University of Texas at Austin.

## **Findings: Minimal direct impact, but significant indirect influence**

The researchers found:

- In non-monitored parks, the percentage of called pitches that are strikes is higher when the race of both umpire and pitcher match than when it does not. This is true not only of whites, but also Hispanics and blacks.
- In QuesTec parks, if the race of the pitcher and umpire match, the likelihood that a called pitch is ruled a strike is reduced by more than one percentage point relative to the same setup in non-QuesTec parks.

This implies umpires implicitly allow their apparent favoritism to be expressed when not being monitored, the study authors say.

- Implicit monitoring — for example, an important pitch viewed by a big crowd — also dramatically alters umpire behavior. On the other hand, white and minority umpires at poorly attended games appear to favor pitchers of the same race by calling more strikes.
- Umpires favor pitchers of the same race only when the pitch won't terminate the batter's plate appearance.

Little evidence was found to indicate the umpire is influenced by the race of either the batter or the catcher.

- A higher strike percentage showed umpires exhibited same-race favoritism in non-QuesTec parks. A lower strike percentage indicated negative bias toward pitchers of different races in QuesTec parks.
- There is some weak evidence that bias is more likely among younger and less experienced umpires.
- Favoritism was a significant factor for pitches thrown to the edge of the strike zone — where umpires have the most discretion — but not for pitches inside or outside the strike zone. In QuesTec parks, the umpire and pitcher having the same race has virtually no effect on pitch location. In non-QuesTec parks, pitches to the edges significantly increase when umpire and pitcher share the same race. The finding suggests pitchers gamble on the fact that this region can reasonably be called as either balls or strikes and therefore offers them an advantage.

In QuesTec parks, matched race is associated with a slight preference for hard-to-hit and hard-to-call curveball pitches. In non-QuesTec parks, that preference quadruples.

### **The researchers concluded:**

- The direct effects on pitch outcomes are small. The indirect effect on players' strategies may have larger impacts on the outcomes of plate appearances and games.

- From the starting pitcher's perspective, a racial match with the umpire helped his statistics by yielding fewer earned runs, fewer hits and fewer home runs.
- Because the majority of umpires are white, teams with minority pitchers have a distinct disadvantage in non-monitored parks.
- There is no evidence that visiting managers adjusted their pitching lineups to minimize exposure of their minority pitchers to the subjective bias of a white umpire.
- In parks without QuesTec, pitchers of the same race threw pitches that allowed umpires the most discretion, apparently to maximize their advantage stemming from the umpires' favoritism.
- A batter who swings is less likely to get a hit when the umpire and pitcher match.
- Applying the effects of favoritism, and given that the average salary of starting pitchers in MLB was \$4.8 million in 2006, the findings suggest minority pitchers were underpaid relative to white pitchers by between \$50,000 and \$400,000 a year.

"If a pitcher expects favoritism, he will incorporate this advantage into his strategy, perhaps throwing pitches that allow the umpire more discretion," the authors write. "If the batter expects such pitches to be called strikes, he is forced to swing at worse pitches, which reduces the likelihood of getting a hit."

## **Not just Major League Baseball; a factor in all work environments**

How many minority [pitchers](#) have had their pitching records diminished by this phenomenon is impossible to say, Sulaeman said, adding that one can only guess at the impact over decades of professional baseball. But discovery of the indirect effect of racial bias in MLB pointedly demonstrates how discrimination alters the behavior of a discriminated

group, say the authors.

In any workplace where pay is based on measured productivity, the findings of small direct and larger indirect effects of favoritism and negative bias have important implications for measuring the extent of wage discrimination not only in baseball, but also in labor markets generally, say the authors.

Supervisory racial bias must be accounted for when generating measures of wage [discrimination](#), the authors conclude.

The researchers' earlier analysis of the data found that ethnic bias is virtually eliminated when an umpire knows his calls are being monitored with video cameras to check for accuracy.

"The good news is that all ballparks are now equipped with this technology, likely eliminating this subconscious bias," said Sulaeman, assistant professor of finance in SMU's Cox School.

## **Monitoring suppresses bias when evaluators are observed for bias**

That isn't the case, however, in other workplaces, where monitoring is not the norm, he said. As a result, supervisors have ample opportunity to subconsciously evaluate those of a different race more negatively, he said. Supervisors may be less prone to this subconscious [bias](#) if they know they are being monitored.

"When their decisions matter more, and when evaluators are themselves more likely to be evaluated by others, our results suggest that these preferences no longer manifest themselves," the authors say.

Provided by Southern Methodist University

Citation: White favoritism by Major League umpers lowers minority pitcher performance, pay (2011, September 7) retrieved 11 May 2024 from <https://phys.org/news/2011-09-white-favoritism-major-league-umps.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.