

Thursday, August 19, 2004

Competitive Balance: the Study

I put together some stuff on "competitive balance," related to the ideas I was looking at in the article yesterday. Let me just throw some graphs at you and see what happens.

One way to see how competitive the league has been is by looking at how far back the second place teams have been at this stage (August 17) in the season. I took the mean deficit all the second place teams were facing as of this date, with a tie for first counting for zero games back. The graph looks like this:

This year, the average second place team is a little less than seven games back of the first place team. Historically (since 1920), that average is about five and a half games, and there are plenty of teams above that. This year's number is well within a standard deviation of that mean.

Next, I defined a "division in play" to be one in which there were teams four games back of the leader as of the date in question. Now, since the number of divisions has changed from two to four to six, we'll look at the percentage of those divisions that have been in play historically. There seem to be some problems with this, but this whole exercise is rather quick and dirty, so we'll just have to be satisfied.

Since 1920, 122 of the 260 division-years in baseball have been in play on this date, about 47%. This year, we've got two out of six, or about 33%. Here's the chart.

Notice that we haven't had a zero since 1986, while they were fairly common before the 1950's, after which they started spacing out to only two or three a decade.

In those divisions, though, were there a lot of teams involved or did we have situations like the AL Central now, with only one team even marginally in the hunt?

We can count up the number of teams in play in any given year, but since the number of teams has changed just as the number of divisions has, this number needs to be adjusted, so we'll look at the percentage of teams in the league still in play. First, the global view: since 1920, there have been 1828 team seasons, and 307 of them were within four games of first place (or in first place themselves) as of August 17th, or about 17%.

This year, we see five teams involved, which is as close as you can get to that 17% number with thirty teams in the league. Here's the graph showing the percentage of teams still in the hunt for a division title.

There was definitely a low period through the thirties and forties, but the leagues made up for that in the late seventies and early eighties with some very high numbers. See in particular 1973, where over 45% of the teams were still in reach of first place at this point.

Even the number of teams in play doesn't tell the whole story. If the majority of those teams are three or four games back, we might see less turnover in the standings. What I have now, then, is the average deficit for teams still in play on this date. By definition, this number is capped at four. We could go as low as zero, which occurs when only the first place teams themselves are in play, or, a subset of that situation, when there are ties for first place but no other challengers.

We've already mentioned that there have been 122 division-seasons still in play since 1920, and that there have been 307 teams involved in those divisions. Subtracting those numbers gets us the number of challengers to the throne: 185. Those 185 teams were a collective 408 games out of first place, an average of about 2.2 games. Note that in the case of a tie, one of the teams is counted as a challenger with a deficit of zero.

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This year, we see three challengers an average of two games behind the leaders. In the chart, blank spots will indicate years in which no divisions were in play.

With the occasional and expected outlier aside, most of these years hover right between one and a half and three.

Conclusion?

In the end, it looks like this year is really not so remarkable in the lack-of-competition department. While that's a little disappointing, it also means we can pre-empt any wild declarations by baseball establishment types of needing to make any more changes (six more wild cards!) in order to ensure hope and faith. It's always been like this, and people have come out to the park to enjoy the games (and make the owners and players very wealthy indeed) regardless.

Again, since I'm someone without terribly much money to throw around, thanks to Baseball Reference for being available free for all my research needs.

Posted by jason in Baseball at 00:12