

# **Heterogeneous Worker Ability and Team–Based Production: Evidence from Major League Baseball, 1920-2009<sup>†</sup>**

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## **Abstract**

A detailed longitudinal dataset is assembled containing annual performance and biographical data for every player over the entire history of professional major league baseball. The data are then aggregated to the team level for the period 1920-2009 in order to test whether teams built on a more intermediate distribution of observed talent perform better than those teams with either too high or too low a mixture of highly able and less able players. The key dependent variable used in the regressions is the percentage of games a team wins each season. Our finding is that conditioning on average player ability, dispersion in team pitching and hitting talent prior to the start of a season is related in a non-linear way to subsequent team performance. This suggests that there is an optimum heterogeneity of ability at the team level that maximises joint output. This result is robust to the inclusion of team fixed effects as well as year dummies and after controlling for the potential endogeneity of skill dispersion. These findings have potentially important applications both inside and outside of the sporting world.

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