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Admissible statistics of educational achievement scores

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Labor economists regularly run regressions with educational achievement scores as a continuous dependent variable. These scores are usually constructed using either a Rasch model or the more general Item response theory, effectively ranking respondents relative to each other. Test scores are thus fundamentally ordinal, posing the question of the meaningfulness of higher level statistics such as means and standard deviations on such scores. I argue that it is meaningful to look at latent achievement as having a ratio scale parallel to human capital, and approximate the amount of bias imposed by assuming normal rather than lognormal scores by imposing wage distributions from the Luxembourg Income Study onto test score data. I find substantial bias in a sample of economics of education papers, even though qualitative conclusions are generally robust.