

Making the invisible visible : essays on overconfidence, discrimination and peer effects

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PhD thesis: Making the Invisible Visible - Essays on Overconfidence, Discrimination and Peer Effects

Jan Feld

Summary

In this thesis I have uncovered hidden relationships in the domains of overconfidence, discrimination and peer effects in education.

Chapters 2 and 3 are about the Dunning-Krueger effect (DK effect) which states that the low skilled tend to be overconfident while the high skilled are more accurate in assessing their skill. Chapter 2 is a methodological discussion on how to estimate the DK effect. We show how the fact that performance and overestimation - the respective measures of skill and overconfidence - contain measurement error can lead to biases in estimating the DK effect. This measurement error can lead to an inverse relationship between performance and overestimation even if there is no systematic relationship between skill and overconfidence. Although this problem has been recognized in the scientific literature we show that the currently used estimation methods, the split sample method and the reliability adjustment, still lead to biased estimates of the DK effect. We further show that the DK effect can be estimated consistently with the instrumental variable method using an independent performance measure as an instrument for skill. In Chapter 3 we estimate the DK effect consistently using the instrumental variable methods. In the context of students' exam grade predictions we find that the low skilled are indeed overconfident while the high skilled are more accurate. This effect is large: a one (grade) point increase in skill is associated with a 0.6

(grade) points increase in overconfidence. Comparing this estimate with three estimates from other currently used estimation methods, we show that OLS as well as the reliability adjusted OLS overestimates this effect, while the split sample method underestimates it.

Chapter 4 is about the difference between discrimination and favoritism. Most of the economic literature on discrimination assumes that differences in outcomes are driven by preferences against others – exophobia. However, we argue that they can also be driven by preference for people like oneself – endophilia. We identify endophilic and exophobic preferences with a field experiment at the SBE that assigned graders randomly to students' exams with and without names from which they could infer students' gender and nationality. We argue that there is evidence for endophilia if graders treat students who match their gender/nationality more favorable when their names are visible. Conversely, there is evidence for exophobia when graders treat students who do not match their nationality less favorable when their names are visible. On average we find endophilia but no exophobia by nationality, and neither endophilia or exophobia by gender. The effect of endophilia by nationality is large; students who are graded by a grader with matching nationality receive on average 0.17 Std. higher grades when their names are visible. Endophilia by nationality seems to be strongest for graders with low teaching evaluations and a lot of teaching experience. Interestingly, endophilia by nationality is only present for students which the grader did not know from his/her class. We identify distributions of graders' preferences for favoritism and discrimination. Further, we extend Becker's model of discrimination to include discriminatory and favoritism preferences and show that the correlation between the two matters for observed wage differentials.

In Chapter 5 we study peer effects in education. We do this with a large dataset from the SBE where students have been randomly assigned to tutorial groups. We find that being assigned to tutorial groups with higher ability, as measured by past GPA, leads to very small increases in student grades in the linear-in-means specification. An increase in peer ability from 6.5 to 7.0 (one standard deviation) is associated with a grade increase from 6.50 to 6.52. This finding hides some heterogeneity: while middle and high ability students benefit from high ability peers, low ability students benefit from middle ability students but are harmed by high ability peers. These findings point to an inverse U-shaped relationship between performance and peer ability: students benefit from better performing peers as long as the difference between own and peer ability does not exceed a certain threshold.