

# SPECIFICATION TESTING ECONOMETRIC MODELS OF DISCRIMINATION IN CRIMINAL JUSTICE

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ABSTRACT. This paper provides a simple, unified framework for applying Becker’s (1957) taste-based discrimination model in measuring discrimination in the highway search and pre-trial release context. The paper’s core argument is that we should not rely on Becker-model estimates in a particular setting when empirical evidence is inconsistent with certain auxiliary predictions the model makes. I derive several testable restrictions that the Becker model imposes, at least one of which is original. My arguments apply at the decision level, not just at the level of racial groups (of motorists, defendants, police, or judges). I provide empirical applications of these restrictions using evidence from influential studies of racial differences in highway search and pre-trial release. Officer-level highway search data from Anwar & Fang’s (2006) Florida study and from Harris County, Texas, both reject restrictions of Knowles, Persico & Todd’s (2001, KPT) two-sided model (a special case of the Becker model); the Florida data, but not the Texas data, are consistent with one of a testable restriction of a more general Becker-model. In the pre-trial release context, I show that Arnold, Dobbie & Yang’s (2018, ADY) published estimates violate two testable Becker-model restrictions. Collectively, these findings suggest the empirical importance of specification testing when we attempt to measure discrimination using the Becker model.

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