

Title: Identification and Inference of Type I and Type II Error Probabilities: Judging the Justice System

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Abstract: We provide new nonparametric identification results for the misclassified binary choice model and show that the misclassification probabilities can be interpreted as type I and type II error probabilities in a range of important empirical settings. We also discuss how to test the identification assumptions and provide alternative assumptions for cases which fail these tests. We use our strategy to answer one of the oldest unresolved questions in law: what is the likelihood that a mistake is made in a courtroom? Using US court case data, we estimate both the probability of convicting an innocent defendant and the probability of acquitting a guilty defendant. Furthermore, we allow these estimates to depend on case and defendant characteristics in a nonparametric way.