

# OFFSETTING OR ENHANCING BEHAVIOR: AN EMPIRICAL ANALYSIS OF MOTORCYCLE HELMET SAFETY LEGISLATION

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## ABSTRACT

This study uses state level panel data from a 33-year period along with repeated cross-sectional individual level crash data to test the hypotheses of offsetting and enhancing behavior with regards to motorcycle helmet legislation. Results presented in this paper find no evidence of offsetting behavior and are consistent with the presence of enhancing behavior. State motorcycle helmet laws are estimated to reduce motorcycle crashes by 18.2% to 33.1%. These results do not appear to be driven by omitted variable bias or non-classical measurement error in motorcycle crashes. Furthermore, individual motorcyclists who are incentivized to wear helmets in order to comply with mandatory helmet laws are estimated to have a 4.2 to 4.8 percentage point reduced probability of receiving a traffic citation for reckless driving behavior. Overall, the results strongly suggest that mandatory helmet laws result in significant reductions in risky driving behavior among motorcyclists.

Keywords: motorcycle helmet legislation, offsetting behavior, nonlinear models with endogeneity