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Inference Based on Many Conditional Moment Inequalities

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Abstract

We construct confidence sets for models defined by many conditional moment inequalities/equalities. The number of conditional moment restrictions can be up to infinitely many. To deal with the vast number of moment restrictions, we exploit the manageability (Pollard (1990)) of the class of moment functions. We verify this condition in five examples from the recent partial identification literature.

The confidence sets are shown to have correct uniform asymptotic size and to exclude parameter values outside the identified set with probability approaching one. Monte Carlo experiments for a conditional stochastic dominance example and a random-coefficient binary-outcome example support the theoretical results.

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