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Tests and confidence sets with correct size when instruments are potentially weak

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Abstract. We consider inference in the linear regression model with one endogenous variable and potentially weak instruments. We construct confidence sets for the coefficient on the endogenous variable by inverting the Anderson–Rubin, Lagrange multiplier, and conditional likelihood-ratio tests. Our confidence sets have correct coverage probabilities even when the instruments are weak. We propose a numerically simple algorithm for finding these confidence sets, and we present a Stata command that supersedes the one presented in Moreira and Poi (*Stata Journal* 3: 57–70).

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