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Resurrecting Weighted Least Squares

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Abstract

This paper shows how asymptotically valid inference in regression models based on the weighted least squares (WLS) estimator can be obtained even when the model for reweighting the data is misspecified. Like the ordinary least squares estimator, the WLS estimator can be accompanied by heterokedasticty-consistent (HC) standard errors without knowledge of the functional form of conditional heteroskedasticity. First, we provide rigorous proofs under reasonable assumptions; second, we provide numerical support in favor of this approach. Indeed, a Monte Carly study demonstrates attractive finite-sample properties compared to the *status quo*, in terms of both estimation and inference.

KEY WORDS: Conditional heteroskedasticity, HC standard errors, weighted least squares.

JEL classification codes: C12, C13, C21.

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