# Alternative Power Analysis in Econometric Models

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**Abstract**

Most attention paid to variance estimation in econometrics focuses on asymptotic validity of hypothesis tests. This paper develops an asymptotic framework in which the efficiency consequences of variance estimation can be quantified and compared across different variance estimators. The general theory is developed and several environments are considered, including generalized methods of moments (GMM), quantile regression, and cluster-robust inference. In the case of cluster-robust inference, it is shown that there is an asymptotic penalty paid for adopting a conservative approach to inference. An application demonstrates how researchers can use these new findings to conduct power analysis and incorporate these costs into their own approach to empirical work.

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