

Referee report for “Some Flexible Parametric Models for Partially Adaptive Estimators of
Econometric Models”

by C. B. Hansen, J. B. McDonald, and P. Theodossiou

The paper considers partially adaptive or quasi maximum-likelihood (QML) estimation based on three families of flexible parametric density functions: the skewed generalized t, the exponential generalized beta of the second kind (EGB2), and the inverse hyperbolic sin (IHS) distributions. These distributions were introduced earlier in the literature, and thus the proposed contribution would appear to be a consideration of the sampling performance of QML estimators based on these distributions. However, the actual contribution is limited to new sampling results for QML estimation based on only one of the flexible parametric density functions – the skewed generalized t density. This is because, using exactly the same experimental design as that considered by Hansen et al., Ramirez et al. (2003) already considered the sampling performance of QML estimators based on the EBG2 and IHS distributions, and, not surprisingly, the Monte Carlo results Ramirez et al. (2003) report for these estimators are basically the same as the results Hansen et al. provide. On the other hand, to my knowledge, there are no similar earlier results for the QML estimators based on the skewed generalized t distribution. The Monte Carlo results for these estimators are informative and, to my knowledge, new. But what the paper actually contributes to the literature should be made more transparent.

Unfortunately, QML estimation based on the skewed generalized t distribution does not appear superior to QML estimation based on the EGB2 or IHS distributions. True, according to the Monte Carlo results, estimators based on the skewed generalized t distribution may provide a small improvement in root mean squared error (RMSE) over other estimators when it comes to estimating the intercept term, but in most applications the intercept term is a catch-all (so that the error has zero mean) and is not of interest. What people are typically interested in is estimation of the slope coefficient, and, according to the Monte Carlo results presented by Hansen et al, QML estimation based on the skewed generalized t distribution does not improve on QML estimation based on the EGB2 and IHS distributions.