Statistical Diagnostics for Skew-t-normal Nonlinear Models

by

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Abstract

This work develops diagnostics for skew-t-normal nonlinear models which provides an useful extension for ordinary normal regression models when the data set under consideration involves heavy tail and asymmetric outcomes. The case-deletion model (CDM) is considered, and several diagnostic measures are derived and discussed. Furthermore, we discuss score test for homogeneity of the variance in skew-t-normal nonlinear models. The ultrasonic calibration data are illustrated our methodology and the properties of score test statistic are investigated through Monte Carlo simulation.

This was joint work with Feng-Chang Xie.