

Model Selection when there are Multiple Breaks

Abstract:

We consider selecting an econometric model when there is uncertainty over both the choice of variables and the occurrence and timing of multiple location shifts. The theory of general-to-simple (Gets) selection is outlined and its efficacy demonstrated in a new set of simulation experiments first for a constant model in orthogonal variables, where only one decision is required to select irrespective of the number of regressors (less than the sample size). That generalizes to including an impulse indicator for every observation in the set of candidate regressors (impulse saturation), as analyzed by Hendry, Johansen and Santos (2008) and Johansen and Nielsen (2009). Monte Carlo experiments show its capability of detecting up to 20 shifts in 100 observations.