

Computer Problem Sheet 5: Bayesian Model Averaging

This exercises is taken adapted from the book Bayesian Econometric Methods (BEM) and Matlab code can be found on the BEM website (you can connect through the link for the book on my website or directly to www.econ.iastate.edu/faculty/tobias/). It is also closely related to the material covered in lectures and discussed on pages 274-278 of Bayesian Econometrics and basically asks you to reproduce the empirical results presented there.

Exercise

A common way to do Bayesian model averaging is described in Chapter 11 of Bayesian Econometrics (see also Exercises 16.1 and 16.2 of BEM). Using this approach carry out a Bayesian model averaging exercise using a data set from the economic growth literature using the g-prior value $g = \frac{1}{N}$. recommended by Fernandez, Ley and Steel (2001b) and the data set used in Fernandez, Ley and Steel (2001a). This data set is taken from the *Journal of Applied Econometrics* data archive (www.econ.queensu.ca/jae) and is also available on the website associated with this book (labelled GROWTH.DAT). This data set covers $N = 72$ countries and contains $K = 41$ potential explanatory variables. The dependent variable is average per capita GDP growth for the period 1960-1992. For the sake of brevity, we will not list all of the explanatory variables here (see the original paper for a detailed description of all the data or Table 16.1 in BEM).

Solution: This is Exercise 16.3 of BEM.