


   (a) Use Excel, Gauss or another statistical program to reproduce the coefficient estimates in Tables 1 and 2. It is not necessary to calculate the restricted regression or test of the restrictions.

   (b) For the simple and augmented Solow growth models, derive the steady-state levels of the relevant variables using \( g = 0.02, \delta = 0.03, \) and \( \alpha = \beta = 0.33 \). Use the sample (N=98) averages to determine \( s_k, s_h \) and \( n \). Calculate the golden-rule saving rates for both versions of the model. Is the world saving too little or too much?

   (c) Using the parameter values in part (b), simulate the approach path for the simple Solow model assuming the capital stock is reduced to half its steady-state value. How does the speed of convergence compare to the approximate linear speed of convergence? Contrast the actual and approximate half-life for output per person (\( y \)). Comment on the results.

5. Using per capita personal income from the FRED database, test the hypothesis of unconditional convergence across U.S. states from 1929 to 2010. Comment on the results.