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**Special Topics in Applied Econometrics: Cross-Country Studies
Summer Term 2012**

Hands-On Assignment 3:
Estimating A Growth Regression with Fixed Effects

Please take out the following hands-on assignment in Matlab

1. Go to the website of Penn World Tables and download data in .csv format on real GDP per capita (rgdp) for all countries for the time period 1970-2009. Import these data into an Excel spreadsheet which can subsequently be loaded into Matlab.
2. Run the program „DataProg.m“ to process the data into a balanced data set of quinquennial data, containing the growth rate of real GDP per capita between t and $t-1$ as well as the log of real GDP per capita.
3. Using the data, compute the Fixed Effects estimator for Equation (14) with y_{it} the growth rate of real GDP per capita between $t-1$ and t and x_{it} the period initial value of the log per capita real GDP, that is, $(rgdpl_{t-1})$.
4. Estimate the asymptotic variance of the regression parameters.
5. Test for serial correlation in the error terms. If serial correlation is present, calculate a robust variance estimator.
6. Compute the FEGLS estimator and its asymptotic variance.
7. Compare and interpret results.