

ECON41820 Econometrics Mid-term project 1

Kevin Denny

Date due: 5pm Thursday November 12th.

I have uploaded data (in Stata format) from the Penn World Tables with data on real consumption, real GDP and population on a set of ten countries over the period 1950 – 2017. Some countries have more years than others. The country name is also included. Your project involves an analysis of one of the countries which has been assigned to you, based on your student id: see the next page. You can work in groups of up to three people if you wish.

With the country you have been assigned you are required to estimate a consumption function and write it up.

1. You should first describe the data carefully using descriptive statistics and appropriate graphs.
2. Start with a simple linear model of consumption & GDP in per capita terms.
 - 2.1 Test for heteroscedasticity, autocorrelation & normality of the residuals.
 - 2.2 Test for functional form mis-specification.
 - 2.3 Test the hypothesis the marginal propensity to consume is 0.7.
 - 2.4 Compare the default standard errors with standard errors robust to heteroscedasticity.
Are your inferences sensitive to this?
3. Estimate a log linear version of the model in 2.
 - 3.1 Use a PE (non-nested) test to compare this model with the linear one.
 - 3.2 Test whether the elasticity of consumption w.r.t. GDP is 1. What do you conclude from this test about the share of consumption in GDP?

Your regression results should be in proper tables as you would see in a paper: do not just include raw output from the computer. The text should be double spaced. Take care to explain what you are doing and why. Be sure to specify the null & alternative hypotheses, which test you are using and what you infer from the tests. If you know of any strengths or weakness of particular tests you should explain. If you want to do anything more sophisticated, that's good: you can get extra marks for it.

Note while you are not required to use Stata, your project should include at the end the computer file with the commands you used e.g. the do-file in Stata. Any papers/books that you cite on should be properly detailed at the end.

Details of how to submit the project to follow.

Mid-term country assignment

If your student ID ends in 0 do Australia

If your student ID ends in 1 do Belgium

If your student ID ends in 2 do Canada

If your student ID ends in 3 do France

If your student ID ends in 4 do Germany

If your student ID ends in 5 do Ireland

If your student ID ends in 6 do Netherlands

If your student ID ends in 7 do Switzerland

If your student ID ends in 8 do United Kingdom

If your student ID ends in 9 do United States

You can work in groups of up to three people. If you do this, you should use the country based on the lowest student id.