Partial exam 2. January 11th, 2017

We want to analyze the sale function of a good which is traded in 200 geographical references. To that end, the file pex2.wf1 contains information about the following variables:

sales: sales of the good in the geographical reference

P1t: price index of the product

P2t: average price index of the market

POB: Population of the geographical reference

income: GDP of the geographical reference

rural: a dummy variable which takes the value 1 if the geopraphical reference can considered as being rural, and 0 otherwise.

All this information has been obtained for 2015. With this information, you should reply to the following questions.

1. Estimate a sales function (double-log model) by using all the explanatory variables (except the dummy variable rural)
2. Test for heteroskedasticity by way of the Breusch-pagan and the White statistics.
3. Analyze the possible existence of near-collinearity problems
4. Test whether the behavior of the rural provinces is different to the rest of the geographical reference
5. Solve the possible problems
6. Interpret the new estimated model in economic terms

Once you have finished the exam, send it to [apleconometrics@gmail.com](mailto:apleconometrics@gmail.com) including your name in the text of the mail.