ECO 82800 Panel Econometrics

Homework 1
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Dataset: Baltagi and Griffin (1983), 18 OECD countries over 19 years, 1960-1978.
Variables:

(1) CO = Country.
(2) YR = Year.
(3) LN(Gas/Car): The logarithm of motor gasoline consumption per auto.
(4) LN(Y/N): The logarithm of real per-capita income.
(5) LN(Pmg/Pgdp): The logarithm of real motor gasoline price.
(6) LN(Car/N): The logarithm of the stock of cars per-capita.

Question 1: Replicate Table 2.5 on Baltagi's book

Table 2.5 Gasoline Demand Data. One-way Error Component Results

	β_1	β_2	β_3	ρ	σ_μ	σ_ν
OLS	0.890	−0.892	−0.763			
	(0.036)*	(0.030)*	(0.019)*			
Between	0.968	−0.964	−0.795			
	(0.156)	(0.133)	(0.082)			
Within	0.662	−0.322	−0.640			
	(0.073)	(0.044)	(0.030)			
WALHUS	0.545	−0.447	−0.605	0.75	0.197	0.113
	(0.066)	(0.046)	(0.029)			
AMEMIYA	0.602	−0.366	−0.621	0.93	0.344	0.092
	(0.066)	(0.042)	(0.027)			
SWAR	0.555	−0.402	−0.607	0.82	0.196	0.092
	(0.059)	(0.042)	(0.026)			
IMLE	0.588	−0.378	−0.616	0.91	0.292	0.092
	(0.066)	(0.046)	(0.029)			

* These are biased standard errors when the true model has error component disturbances (see Moulton, 1986).
Source: Baltagi and Griffin (1983). Reproduced by permission of Elsevier Science Publishers B.V. (North-Holland).

Replicating Table 2.5

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	OLS	Between	Within	WALHUS	AMEMIYA	SWAR	IMLE
LINCOMEP	0.890***	0.968***	0.662***	0.543***	0.583***	0.759***	0.588
	(0.0358)	(0.156)	(0.0734)	(0.0558)	(0.0499)	(0.0423)	(0.694)
LRPMG	-0.892***	-0.964***	-0.322***	-0.471***	-0.567***	-0.767***	-0.378
	(0.0303)	(0.133)	(0.0441)	(0.0400)	(0.0386)	(0.0351)	(0.445)
LCARPCAP	-0.763***	-0.795***	-0.640***	-0.606***	-0.628***	-0.708***	-0.616*
	(0.0186)	(0.0825)	(0.0297)	(0.0249)	(0.0235)	(0.0213)	(0.291)
Standard errors in parentheses							
="* p<0.05	** p<0.01	*** p<0.001"					