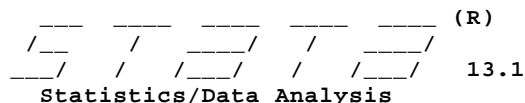


User: Total



Special Edition

Copyright 1985-2013 StataCorp LP  
 StataCorp  
 4905 Lakeway Drive  
 College Station, Texas 77845 USA  
 800-STATATA-PC <http://www.stata.com>  
 979-696-4600 [stata@stata.com](mailto:stata@stata.com)  
 979-696-4601 (fax)

Single-user Stata perpetual license:  
 Serial number: 401306262477  
 Licensed to: ESGHT  
 Universidade do Algarve

Notes:

- 1. (/v# option or -set maxvar-) 5000 maximum variables

```
1 . use "F:\Tese\Tratamento dos dados\Dados\Total B2.dta"
2 . log using "F:\Tese\Tratamento dos dados\Dados\Portugal\Resultados\Dados em painel\Output EF T
```

```
name: <unnamed>
log: F:\Tese\Tratamento dos dados\Dados\Portugal\Resultados\Dados em painel\Output EF T
log type: smcl
opened on: 20 Jul 2016, 14:23:34
```

```
3 . regress BCCO DLAT P_DLAT ROI ROI2 P_ROI TAN P_TAN RISVT P_RISVT
```

Source	SS	df	MS	Number of obs = 7980		
Model	71.9952587	9	7.99947318	F( 9, 7970) =	523.93	
Residual	121.688054	7970	.015268263	Prob > F =	0.0000	
				R-squared =	0.3717	
				Adj R-squared =	0.3710	
				Root MSE =	.12356	
Total	193.683313	7979	.024274134			

BCCO	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
DLAT	.0087904	.0021473	4.09	0.000	.0045812	.0129996
P_DLAT	.0246447	.0022833	10.79	0.000	.020169	.0291205
ROI	.8278408	.0250161	33.09	0.000	.7788027	.876879
ROI2	.4757681	.0299229	15.90	0.000	.4171115	.5344247
P_ROI	-.1400593	.0337995	-4.14	0.000	-.2063151	-.0738035
TAN	-.1112758	.006572	-16.93	0.000	-.1241586	-.0983929
P_TAN	-.1512519	.009783	-15.46	0.000	-.1704292	-.1320746
RISVT	-.0476535	.0203388	-2.34	0.019	-.0875229	-.0077841
P_RISVT	-.2467138	.0263276	-9.37	0.000	-.2983228	-.1951048
_cons	.7196309	.0072367	99.44	0.000	.7054451	.7338168

```
4 .
5 . estat ovtest
```

Ramsey RESET test using powers of the fitted values of BCCO  
 Ho: model has no omitted variables  
 F(3, 7967) = 44.55  
 Prob > F = 0.0000

```
6 .
7 . estat ovtest, rhs
   (note: ROI dropped because of collinearity)
   (note: ROI^2 dropped because of collinearity)
```

Ramsey RESET test using powers of the independent variables  
 Ho: model has no omitted variables  
 F(26, 7945) = 157.56  
 Prob > F = 0.0000

```
8 .
9 . pwcorr BCCO DLAT P_DLAT ROI ROI2 P_ROI TAN P_TAN RISVT P_RISVT, sig star(.05)
```

	BCCO	DLAT	P_DLAT	ROI	ROI2	P_ROI	TAN
BCCO	1.0000						
DLAT	0.0625* 0.0000	1.0000					
P_DLAT	-0.1244* 0.0000	0.0109 0.3300	1.0000				
ROI	0.4365* 0.0000	0.0674* 0.0000	0.0322* 0.0040	1.0000			
ROI2	0.0376* 0.0008	-0.1580* 0.0000	-0.0097 0.3875	-0.2919* 0.0000	1.0000		
P_ROI	0.2932* 0.0000	-0.0181 0.1064	0.1104* 0.0000	0.7580* 0.0000	-0.3570* 0.0000	1.0000	
TAN	-0.3347* 0.0000	0.1728* 0.0000	-0.0652* 0.0000	-0.1002* 0.0000	-0.0973* 0.0000	-0.1082* 0.0000	1.0000
P_TAN	-0.2929* 0.0000	-0.0521* 0.0000	0.8426* 0.0000	-0.0311* 0.0055	-0.0129 0.2493	0.0188 0.0935	0.2705* 0.0000
RISVT	-0.2025* 0.0000	-0.0662* 0.0000	0.1248* 0.0000	-0.1805* 0.0000	0.0740* 0.0000	-0.1125* 0.0000	-0.0326* 0.0036
P_RISVT	-0.2093* 0.0000	-0.1587* 0.0000	0.6200* 0.0000	-0.0774* 0.0000	0.0907* 0.0000	-0.0538* 0.0000	-0.1291* 0.0000
		P_TAN	RISVT	P_RISVT			
P_TAN		1.0000					
RISVT		0.0873* 0.0000	1.0000				
P_RISVT		0.5185* 0.0000	0.6536* 0.0000	1.0000			

```
10 .
11 . estat vif
```

Variable	VIF	1/VIF
P_DLAT	6.63	0.150927
P_TAN	6.03	0.165951
P_RISVT	4.04	0.247772
P_ROI	2.70	0.370677
ROI	2.53	0.395210
RISVT	2.42	0.412795
TAN	1.80	0.555330
DLAT	1.23	0.813412
ROI2	1.20	0.831738
Mean VIF	3.17	

```
12 .
13 . estat hettest
```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity  
 Ho: Constant variance  
 Variables: fitted values of BCCO

chi2(1) = 28.73  
 Prob > chi2 = 0.0000

```
14 .
15 . estat imtest, white
```

White's test for Ho: homoskedasticity  
 against Ha: unrestricted heteroskedasticity

chi2(37) = 1504.85  
 Prob > chi2 = 0.0000

Cameron & Trivedi's decomposition of IM-test

Source	chi2	df	p
Heteroskedasticity	1504.85	37	0.0000
Skewness	132.28	9	0.0000
Kurtosis	61.83	1	0.0000
Total	1698.96	47	0.0000

```
16 .
17 . regress BCCO DLAT P_DLAT ROI ROI2 P_ROI TAN P_TAN RISVT P_RISVT, vce(cluster id)
```

Linear regression Number of obs = 7980  
F( 9, 1595) = 180.62  
Prob > F = 0.0000  
R-squared = 0.3717  
Root MSE = .12356

(Std. Err. adjusted for 1596 clusters in id)

BCCO	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
DLAT	.0087904	.0052866	1.66	0.097	-.001579	.0191598
P_DLAT	.0246447	.0048259	5.11	0.000	.015179	.0341104
ROI	.8278408	.0542547	15.26	0.000	.7214228	.9342589
ROI2	.4757681	.0495715	9.60	0.000	.378536	.5730003
P_ROI	-.1400593	.0689107	-2.03	0.042	-.2752244	-.0048942
TAN	-.1112758	.013996	-7.95	0.000	-.1387282	-.0838233
P_TAN	-.1512519	.0191514	-7.90	0.000	-.1888165	-.1136873
RISVT	-.0476535	.0352282	-1.35	0.176	-.116752	.021445
P_RISVT	-.2467138	.0512853	-4.81	0.000	-.3473075	-.14612
_cons	.7196309	.0173145	41.56	0.000	.6856693	.7535925

```
18 .
19 . xtreg BCCO DLAT P_DLAT ROI ROI2 P_ROI TAN P_TAN RISVT P_RISVT, fe
```

```
Fixed-effects (within) regression      Number of obs      =      7980
Group variable: id                    Number of groups   =      1596

R-sq:  within = 0.2544                Obs per group: min =          5
      between = 0.1616                avg =          5.0
      overall = 0.1637                max =          5

corr(u_i, Xb) = -0.5338                F(9,6375)          =      241.69
                                          Prob > F           =      0.0000
```

BCCO	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
DLAT	.0142899	.0223229	0.64	0.522	-.0294705	.0580502
P_DLAT	-.0481749	.0278685	-1.73	0.084	-.1028065	.0064567
ROI	.7494036	.0259876	28.84	0.000	.6984592	.800348
ROI2	.2752316	.0231981	11.86	0.000	.2297555	.3207077
P_ROI	-.1706497	.0320157	-5.33	0.000	-.2334113	-.1078882
TAN	-.0436289	.0195565	-2.23	0.026	-.0819662	-.0052916
P_TAN	-.1351383	.0261923	-5.16	0.000	-.1864839	-.0837926
RISVT	-.0304211	.0175719	-1.73	0.083	-.0648678	.0040257
P_RISVT	-.1201894	.0232362	-5.17	0.000	-.1657401	-.0746386
_cons	.7418892	.0487362	15.22	0.000	.6463499	.8374286
sigma_u	.14633801					
sigma_e	.07906875					
rho	.77402899	(fraction of variance due to u_i)				

F test that all u\_i=0: F(1595, 6375) = 8.21 Prob > F = 0.0000

```
20 .
21 . xttest3
```

Modified Wald test for groupwise heteroskedasticity in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

```
chi2 (1596) = 2.5e+07
Prob>chi2 = 0.0000
```

```
22 .
23 . xtreg BCCO DLAT P_DLAT ROI ROI2 P_ROI TAN P_TAN RISVT P_RISVT, fe vce(cluster id)
```

```
Fixed-effects (within) regression      Number of obs      =      7980
Group variable: id                    Number of groups   =      1596

R-sq:  within = 0.2544                Obs per group: min =          5
      between = 0.1616                avg =          5.0
      overall = 0.1637                max =          5

corr(u_i, Xb) = -0.5338                F(9,1595)         =      83.22
                                          Prob > F           =      0.0000
```

(Std. Err. adjusted for 1596 clusters in id)

BCCO	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
DLAT	.0142899	.0302168	0.47	0.636	-.0449791	.0735588
P_DLAT	-.0481749	.0368352	-1.31	0.191	-.1204255	.0240757
ROI	.7494036	.0442687	16.93	0.000	.6625726	.8362346
ROI2	.2752316	.0369634	7.45	0.000	.2027297	.3477335
P_ROI	-.1706497	.0574487	-2.97	0.003	-.2833327	-.0579668
TAN	-.0436289	.0247057	-1.77	0.078	-.092088	.0048303
P_TAN	-.1351383	.0361981	-3.73	0.000	-.2061391	-.0641374
RISVT	-.0304211	.0230975	-1.32	0.188	-.0757258	.0148836
P_RISVT	-.1201894	.0383262	-3.14	0.002	-.1953643	-.0450144



```

28 .
29 . quietly regress BCCO DLAT P_DLAT ROI ROI2 P_ROI TAN P_TAN RISVT P_RISVT, vce(cluster id)
30 .
31 . estimates store POLS_rob
32 .
33 . quietly xtreg BCCO DLAT P_DLAT ROI ROI2 P_ROI TAN P_TAN RISVT P_RISVT, fe
34 .
35 . estimates store FE
36 .
37 . quietly xtreg BCCO DLAT P_DLAT ROI ROI2 P_ROI TAN P_TAN RISVT P_RISVT, fe vce(cluster id)
38 .
39 . estimates store FE_rob
40 .
41 . quietly xtreg BCCO DLAT P_DLAT ROI ROI2 P_ROI TAN P_TAN RISVT P_RISVT, re
42 .
43 . estimates store RE
44 .
45 . quietly xtreg BCCO DLAT P_DLAT ROI ROI2 P_ROI TAN P_TAN RISVT P_RISVT, re vce(cluster id)
46 .
47 . estimates store RE_rob
48 .
49 . estimates table POLS_rob FE FE_rob RE RE_rob, b se stats(N r2 r2_o r2_b r2_w F chi2) b(%7.5f)

```

Variable	POLS_~b	FE	FE_rob	RE	RE_rob
DLAT	0.00879 0.00529	0.01429 0.02232	0.01429 0.03022	0.00745 0.00362	0.00745 0.00499
P_DLAT	0.02464 0.00483	-0.04817 0.02787	-0.04817 0.03684	0.01733 0.00336	0.01733 0.00442
ROI	0.82784 0.05425	0.74940 0.02599	0.74940 0.04427	0.77244 0.02378	0.77244 0.04286
ROI2	0.47577 0.04957	0.27523 0.02320	0.27523 0.03696	0.31779 0.02260	0.31779 0.03318
P_ROI	-0.14006 0.06891	-0.17065 0.03202	-0.17065 0.05745	-0.17929 0.02985	-0.17929 0.05604
TAN	-0.11128 0.01400	-0.04363 0.01956	-0.04363 0.02471	-0.09707 0.01026	-0.09707 0.01251
P_TAN	-0.15125 0.01915	-0.13514 0.02619	-0.13514 0.03620	-0.13525 0.01480	-0.13525 0.01800
RISVT	-0.04765 0.03523	-0.03042 0.01757	-0.03042 0.02310	-0.03277 0.01682	-0.03277 0.02342
P_RISVT	-0.24671 0.05129	-0.12019 0.02324	-0.12019 0.03833	-0.14756 0.02217	-0.14756 0.03789
_cons	0.71963 0.01731	0.74189 0.04874	0.74189 0.06624	0.71471 0.01198	0.71471 0.01656
N	7980	7980	7980	7980	7980
r2	0.37172	0.25440	0.25440		
r2_o		0.16368	0.16368	0.36773	0.36773
r2_b		0.16157	0.16157	0.41822	0.41822
r2_w		0.25440	0.25440	0.25149	0.25149
F	1.8e+02	2.4e+02	83.22090		
chi2				3.2e+03	1.4e+03

legend: b/se

50 .  
51 . xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

$$BCCO[id,t] = Xb + u[id] + e[id,t]$$

Estimated results:

	Var	sd = sqrt(Var)
BCCO	.0242741	.1558016
e	.0062519	.0790688
u	.008668	.0931019

Test: Var(u) = 0

$$\frac{\text{chibar2}(01)}{\text{Prob} > \text{chibar2}} = \frac{5276.90}{0.0000}$$

52 .  
53 . xtoverid

Test of overidentifying restrictions: fixed vs random effects  
Cross-section time-series model: xtreg re robust cluster(id)  
Sargan-Hansen statistic **88.734** Chi-sq(9) P-value = **0.0000**

54 .  
55 . hausman FE RE, sigmamore

	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) FE	(B) RE		
DLAT	.0142899	.0074516	.0068383	.0221999
P_DLAT	-.0481749	.017333	-.0655078	.0278794
ROI	.7494036	.7724395	-.0230359	.0109592
ROI2	.2752316	.3177862	-.0425546	.005982
P_ROI	-.1706497	-.1792852	.0086355	.0122272
TAN	-.0436289	-.0970655	.0534367	.0168253
P_TAN	-.1351383	-.135249	.0001108	.0218541
RISVT	-.0304211	-.0327711	.00235	.0055334
P_RISVT	-.1201894	-.147557	.0273676	.0075337

b = consistent under Ho and Ha; obtained from xtreg  
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\begin{aligned} \text{chi2}(9) &= (b-B)'[(V_b-V_B)^{-1}](b-B) \\ &= \mathbf{129.30} \\ \text{Prob}>\text{chi2} &= \mathbf{0.0000} \end{aligned}$$

56 .  
57 . log close  
name: <unnamed>  
log: F:\Tese\Tratamento dos dados\Dados\Portugal\Resultados\Dados em painel\Output EF T  
log type: smcl  
closed on: 20 Jul 2016, 14:23:48

58 .