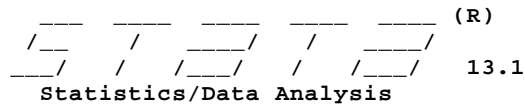


User: PT



Special Edition

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Notes:

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

```
1 . use "F:\Tese\Tratamento dos dados\Dados\Portugal\BD\BD PT regressão B3.dta"
2 . log using "F:\Tese\Tratamento dos dados\Dados\Portugal\Resultados\Dados em painel\Output ET P
> 1"
```

```
name: <unnamed>
log: F:\Tese\Tratamento dos dados\Dados\Portugal\Resultados\Dados em painel\Output ET P
> 1
log type: smcl
opened on: 20 Jul 2016, 11:52:42
```

```
3 . regress ET CVT DLAT ROI FCF R_FCF AGE TAN RISVT C_RISVT T_RISVT BCCO
```

| Source | SS | df | MS | Number of obs = | 3427 |
|----------|------------|------|------------|-----------------|--------|
| Model | 44.105873 | 11 | 4.00962482 | F(11, 3415) = | 72.42 |
| Residual | 189.070807 | 3415 | .055364804 | Prob > F = | 0.0000 |
| Total | 233.17668 | 3426 | .068060911 | R-squared = | 0.1892 |
| | | | | Adj R-squared = | 0.1865 |
| | | | | Root MSE = | .2353 |

| ET | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] |
|---------|-----------|-----------|--------|-------|----------------------|
| CVT | .1292226 | .0304355 | 4.25 | 0.000 | .0695489 .1888963 |
| DLAT | .056682 | .0057486 | 9.86 | 0.000 | .0454109 .0679531 |
| ROI | -.3251134 | .0456688 | -7.12 | 0.000 | -.4146543 -.2355725 |
| FCF | -.0359717 | .0103912 | -3.46 | 0.001 | -.0563452 -.0155981 |
| R_FCF | -.2796306 | .0810394 | -3.45 | 0.001 | -.4385212 -.1207399 |
| AGE | -.0038651 | .0002827 | -13.67 | 0.000 | -.0044195 -.0033108 |
| TAN | .2577607 | .0235732 | 10.93 | 0.000 | .2115417 .3039798 |
| RISVT | .4441054 | .0721487 | 6.16 | 0.000 | .3026463 .5855644 |
| C_RISVT | -.1477183 | .0397459 | -3.72 | 0.000 | -.2256464 -.0697902 |
| T_RISVT | -.4862082 | .1139417 | -4.27 | 0.000 | -.709609 .-.2628074 |
| BCCO | .088315 | .0297771 | 2.97 | 0.003 | .0299322 .1466979 |
| _cons | .1922307 | .0284308 | 6.76 | 0.000 | .1364876 .2479739 |

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

Ramsey RESET test using powers of the fitted values of ET
 Ho: model has no omitted variables
 F(3, 3412) = 7.69
 Prob > F = 0.0000

6 .
 7 . estat ovtest, rhs

Ramsey RESET test using powers of the independent variables
 Ho: model has no omitted variables
 F(33, 3382) = 3.41
 Prob > F = 0.0000

8 .
 9 . pwcorr ET CVT DLAT ROI FCF R_FCF AGE TAN RISVT C_RISVT T_RISVT BCCO, sig star(.05)

| | ET | CVT | DLAT | ROI | FCF | R_FCF | AGE |
|---------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| ET | 1.0000 | | | | | | |
| CVT | 0.0297 0.0820 | 1.0000 | | | | | |
| DLAT | 0.2454* 0.0000 | 0.0114 0.5035 | 1.0000 | | | | |
| ROI | -0.1231* 0.0000 | 0.1465* 0.0000 | 0.0122 0.4739 | 1.0000 | | | |
| FCF | -0.0255 0.1356 | 0.1192* 0.0000 | 0.0621* 0.0003 | 0.1968* 0.0000 | 1.0000 | | |
| R_FCF | -0.0129 0.4507 | -0.0705* 0.0000 | -0.0834* 0.0000 | -0.1725* 0.0000 | -0.7384* 0.0000 | 1.0000 | |
| AGE | -0.2469* 0.0000 | 0.0014 0.9332 | 0.0347* 0.0419 | -0.0251 0.1419 | -0.0313 0.0670 | 0.0372* 0.0293 | 1.0000 |
| TAN | 0.3050* 0.0000 | -0.0124 0.4694 | 0.3519* 0.0000 | -0.1307* 0.0000 | 0.0268 0.1170 | -0.0422* 0.0135 | -0.1803* 0.0000 |
| RISVT | 0.0855* 0.0000 | 0.0993* 0.0000 | -0.0043 0.8026 | -0.1708* 0.0000 | -0.2425* 0.0000 | 0.2223* 0.0000 | -0.0210 0.2189 |
| C_RISVT | 0.0178 0.2984 | 0.9287* 0.0000 | 0.0142 0.4054 | 0.0506* 0.0030 | 0.1048* 0.0000 | -0.0814* 0.0000 | 0.0061 0.7215 |
| T_RISVT | 0.1872* 0.0000 | 0.0488* 0.0043 | 0.1506* 0.0000 | -0.1801* 0.0000 | -0.2048* 0.0000 | 0.1470* 0.0000 | -0.1017* 0.0000 |
| BCCO | -0.0998* 0.0000 | 0.0929* 0.0000 | 0.0509* 0.0028 | 0.4223* 0.0000 | 0.1460* 0.0000 | -0.0358* 0.0359 | 0.0580* 0.0007 |
| | | TAN | RISVT | C_RISVT | T_RISVT | BCCO | |
| TAN | 1.0000 | | | | | | |
| RISVT | -0.0521* 0.0023 | 1.0000 | | | | | |
| C_RISVT | -0.0116 0.4954 | 0.1211* 0.0000 | 1.0000 | | | | |
| T_RISVT | 0.4644* 0.0000 | 0.7546* 0.0000 | 0.0611* 0.0003 | 1.0000 | | | |
| BCCO | -0.4143* 0.0000 | -0.2055* 0.0000 | 0.0307 0.0718 | -0.3848* 0.0000 | 1.0000 | | |

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

| Variable | VIF | 1/VIF |
|----------|------|----------|
| CVT | 7.99 | 0.125096 |
| C_RISVT | 7.85 | 0.127462 |
| T_RISVT | 5.83 | 0.171559 |
| RISVT | 4.74 | 0.211053 |
| TAN | 3.12 | 0.320446 |
| FCF | 2.35 | 0.425018 |
| R_FCF | 2.32 | 0.431865 |
| BCCO | 1.67 | 0.599479 |
| ROI | 1.34 | 0.745728 |
| DLAT | 1.25 | 0.800316 |
| AGE | 1.05 | 0.948083 |
| Mean VIF | 3.59 | |

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

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

chi2(1) = 1.75
 Prob > chi2 = 0.1862

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

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

chi2(73) = 300.04
 Prob > chi2 = 0.0000

Cameron & Trivedi's decomposition of IM-test

| Source | chi2 | df | p |
|--------------------|--------|----|--------|
| Heteroskedasticity | 300.04 | 73 | 0.0000 |
| Skewness | 105.85 | 11 | 0.0000 |
| Kurtosis | 267.82 | 1 | 0.0000 |
| Total | 673.71 | 85 | 0.0000 |

```
16 .
17 . regress ET CVT DLAT ROI FCF R_FCF AGE TAN RISVT C_RISVT T_RISVT BCCO, vce(cluster id)
```

Linear regression

Number of obs = 3427
 F(11, 685) = 28.76
 Prob > F = 0.0000
 R-squared = 0.1892
 Root MSE = .2353

(Std. Err. adjusted for 686 clusters in id)

| ET | Coef. | Robust Std. Err. | t | P> t | [95% Conf. Interval] |
|-------|-----------|------------------|-------|-------|----------------------|
| CVT | .1292226 | .0275975 | 4.68 | 0.000 | .0750367 .1834085 |
| DLAT | .056682 | .0109858 | 5.16 | 0.000 | .0351122 .0782518 |
| ROI | -.3251134 | .0588689 | -5.52 | 0.000 | -.4406986 -.2095282 |
| FCF | -.0359717 | .0162475 | -2.21 | 0.027 | -.0678725 -.0040708 |
| R_FCF | -.2796306 | .1183739 | -2.36 | 0.018 | -.5120498 -.0472113 |
| AGE | -.0038651 | .0005793 | -6.67 | 0.000 | -.0050025 -.0027278 |
| TAN | .2577607 | .0383605 | 6.72 | 0.000 | .1824425 .333079 |
| RISVT | .4441054 | .1034293 | 4.29 | 0.000 | .2410288 .6471819 |

(Std. Err. adjusted for 686 clusters in id)

| ET | Coef. | Robust Std. Err. | t | P> t | [95% Conf. Interval] | |
|---------|-----------|-----------------------------------|--------|-------|----------------------|-----------|
| CVT | .0763239 | .0130379 | 5.85 | 0.000 | .0507248 | .101923 |
| DLAT | .2305189 | .0572166 | 4.03 | 0.000 | .118178 | .3428599 |
| ROI | -.3560018 | .0325507 | -10.94 | 0.000 | -.4199129 | -.2920906 |
| FCF | -.0052591 | .0066279 | -0.79 | 0.428 | -.0182725 | .0077544 |
| R_FCF | .0271291 | .0979346 | 0.28 | 0.782 | -.1651589 | .2194171 |
| AGE | -.0034684 | .0018904 | -1.83 | 0.067 | -.00718 | .0002432 |
| TAN | .1347559 | .0382013 | 3.53 | 0.000 | .0597501 | .2097616 |
| RISVT | .0664125 | .0442183 | 1.50 | 0.134 | -.0204072 | .1532321 |
| C_RISVT | -.0671102 | .0148008 | -4.53 | 0.000 | -.0961706 | -.0380498 |
| T_RISVT | -.037288 | .0699732 | -0.53 | 0.594 | -.1746757 | .1000998 |
| BCCO | -.0336183 | .01781 | -1.89 | 0.060 | -.0685871 | .0013504 |
| _cons | -.1762961 | .2030917 | -0.87 | 0.386 | -.5750529 | .2224608 |
| sigma_u | .25639439 | | | | | |
| sigma_e | .09176176 | | | | | |
| rho | .88645613 | (fraction of variance due to u_i) | | | | |

24 .

25 . xtreg ET CVT DLAT ROI FCF R_FCF AGE TAN RISVT C_RISVT T_RISVT BCCO, re

```

Random-effects GLS regression           Number of obs   =   3427
Group variable: id                     Number of groups =   686

R-sq:  within = 0.1601                 Obs per group:  min =    4
        between = 0.1746                               avg   =    5.0
        overall = 0.1713                               max   =    5

Wald chi2(11)   =   653.73
corr(u_i, X)   = 0 (assumed)           Prob > chi2    =   0.0000
    
```

| ET | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|---------|-----------|-----------------------------------|--------|-------|----------------------|-----------|
| CVT | .0833586 | .0132609 | 6.29 | 0.000 | .0573678 | .1093495 |
| DLAT | .1046195 | .0097303 | 10.75 | 0.000 | .0855484 | .1236906 |
| ROI | -.3358143 | .0232234 | -14.46 | 0.000 | -.3813312 | -.2902974 |
| FCF | -.0084991 | .0051214 | -1.66 | 0.097 | -.0185369 | .0015387 |
| R_FCF | .002262 | .039434 | 0.06 | 0.954 | -.0750272 | .0795513 |
| AGE | -.0041928 | .0005211 | -8.05 | 0.000 | -.0052141 | -.0031715 |
| TAN | .1375275 | .019662 | 6.99 | 0.000 | .0989907 | .1760643 |
| RISVT | .0957236 | .0373338 | 2.56 | 0.010 | .0225507 | .1688964 |
| C_RISVT | -.0769902 | .0172847 | -4.45 | 0.000 | -.1108676 | -.0431127 |
| T_RISVT | -.0692035 | .0579322 | -1.19 | 0.232 | -.1827486 | .0443415 |
| BCCO | -.0324055 | .0182141 | -1.78 | 0.075 | -.0681044 | .0032935 |
| _cons | .2125079 | .0352426 | 6.03 | 0.000 | .1434336 | .2815822 |
| sigma_u | .21498949 | | | | | |
| sigma_e | .09176176 | | | | | |
| rho | .84589839 | (fraction of variance due to u_i) | | | | |

26 .

27 . xtreg ET CVT DLAT ROI FCF R_FCF AGE TAN RISVT C_RISVT T_RISVT BCCO, re vce(cluster id)

```

Random-effects GLS regression           Number of obs   =   3427
Group variable: id                     Number of groups =   686

R-sq:  within = 0.1601                 Obs per group:  min =    4
        between = 0.1746                               avg   =    5.0
        overall = 0.1713                               max   =    5

Wald chi2(11)   =   503.39
corr(u_i, X)   = 0 (assumed)           Prob > chi2    =   0.0000
    
```

(Std. Err. adjusted for 686 clusters in id)

| ET | Coef. | Robust Std. Err. | z | P> z | [95% Conf. Interval] | |
|---------|-----------|-----------------------------------|--------|-------|----------------------|-----------|
| CVT | .0833586 | .0129792 | 6.42 | 0.000 | .05792 | .1087973 |
| DLAT | .1046195 | .0149876 | 6.98 | 0.000 | .0752444 | .1339946 |
| ROI | -.3358143 | .03148 | -10.67 | 0.000 | -.397514 | -.2741146 |
| FCF | -.0084991 | .0064985 | -1.31 | 0.191 | -.0212359 | .0042377 |
| R_FCF | .002262 | .0931147 | 0.02 | 0.981 | -.1802394 | .1847634 |
| AGE | -.0041928 | .0006145 | -6.82 | 0.000 | -.0053973 | -.0029883 |
| TAN | .1375275 | .0297571 | 4.62 | 0.000 | .0792047 | .1958503 |
| RISVT | .0957236 | .0442183 | 2.16 | 0.030 | .0090573 | .1823898 |
| C_RISVT | -.0769902 | .0147365 | -5.22 | 0.000 | -.1058732 | -.0481071 |
| T_RISVT | -.0692035 | .0688764 | -1.00 | 0.315 | -.2041987 | .0657917 |
| BCCO | -.0324055 | .0178473 | -1.82 | 0.069 | -.0673855 | .0025745 |
| _cons | .2125079 | .0545021 | 3.90 | 0.000 | .1056859 | .31933 |
| sigma_u | .21498949 | | | | | |
| sigma_e | .09176176 | | | | | |
| rho | .84589839 | (fraction of variance due to u_i) | | | | |

```

28 .
29 . quietly regress ET CVT DLAT ROI FCF R_FCF AGE TAN RISVT C_RISVT T_RISVT BCCO, vce(cluster id)
30 .
31 . estimates store POLS_rob
32 .
33 . quietly xtreg ET CVT DLAT ROI FCF R_FCF AGE TAN RISVT C_RISVT T_RISVT BCCO, fe
34 .
35 . estimates store FE
36 .
37 . quietly xtreg ET CVT DLAT ROI FCF R_FCF AGE TAN RISVT C_RISVT T_RISVT BCCO, fe vce(cluster id)
38 .
39 . estimates store FE_rob
40 .
41 . quietly xtreg ET CVT DLAT ROI FCF R_FCF AGE TAN RISVT C_RISVT T_RISVT BCCO, re
42 .
43 . estimates store RE
44 .
45 . quietly xtreg ET CVT DLAT ROI FCF R_FCF AGE TAN RISVT C_RISVT T_RISVT BCCO, 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 |
|----------|----------|----------|----------|----------|----------|
| CVT | 0.12922 | 0.07632 | 0.07632 | 0.08336 | 0.08336 |
| | 0.02760 | 0.01322 | 0.01304 | 0.01326 | 0.01298 |
| DLAT | 0.05668 | 0.23052 | 0.23052 | 0.10462 | 0.10462 |
| | 0.01099 | 0.01959 | 0.05722 | 0.00973 | 0.01499 |
| ROI | -0.32511 | -0.35600 | -0.35600 | -0.33581 | -0.33581 |
| | 0.05887 | 0.02357 | 0.03255 | 0.02322 | 0.03148 |
| FCF | -0.03597 | -0.00526 | -0.00526 | -0.00850 | -0.00850 |
| | 0.01625 | 0.00515 | 0.00663 | 0.00512 | 0.00650 |
| R_FCF | -0.27963 | 0.02713 | 0.02713 | 0.00226 | 0.00226 |
| | 0.11837 | 0.03949 | 0.09793 | 0.03943 | 0.09311 |
| AGE | -0.00387 | -0.00347 | -0.00347 | -0.00419 | -0.00419 |
| | 0.00058 | 0.00113 | 0.00189 | 0.00052 | 0.00061 |
| TAN | 0.25776 | 0.13476 | 0.13476 | 0.13753 | 0.13753 |

| | | | | | |
|---------|----------|----------|----------|----------|----------|
| | 0.03836 | 0.02237 | 0.03820 | 0.01966 | 0.02976 |
| RISVT | 0.44411 | 0.06641 | 0.06641 | 0.09572 | 0.09572 |
| | 0.10343 | 0.03746 | 0.04422 | 0.03733 | 0.04422 |
| C_RISVT | -0.14772 | -0.06711 | -0.06711 | -0.07699 | -0.07699 |
| | 0.03188 | 0.01722 | 0.01480 | 0.01728 | 0.01474 |
| T_RISVT | -0.48621 | -0.03729 | -0.03729 | -0.06920 | -0.06920 |
| | 0.15674 | 0.05805 | 0.06997 | 0.05793 | 0.06888 |
| BCCO | 0.08832 | -0.03362 | -0.03362 | -0.03241 | -0.03241 |
| | 0.04821 | 0.01860 | 0.01781 | 0.01821 | 0.01785 |
| _cons | 0.19223 | -0.17630 | -0.17630 | 0.21251 | 0.21251 |
| | 0.05031 | 0.06975 | 0.20309 | 0.03524 | 0.05450 |
| <hr/> | | | | | |
| N | 3427 | 3427 | 3427 | 3427 | 3427 |
| r2 | 0.18915 | 0.17181 | 0.17181 | | |
| r2_o | | 0.12898 | 0.12898 | 0.17134 | 0.17134 |
| r2_b | | 0.13088 | 0.13088 | 0.17459 | 0.17459 |
| r2_w | | 0.17181 | 0.17181 | 0.16007 | 0.16007 |
| F | 28.75978 | 51.48425 | 33.04807 | | |
| chi2 | | | | 6.5e+02 | 5.0e+02 |

legend: b/se

50 .
51 . xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

ET[id,t] = Xb + u[id] + e[id,t]

Estimated results:

| | Var | sd = sqrt(Var) |
|----|----------|----------------|
| ET | .0680609 | .2608849 |
| e | .0084202 | .0917618 |
| u | .0462205 | .2149895 |

Test: Var(u) = 0

chibar2(01) = 4746.44
Prob > chibar2 = 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 52.094 Chi-sq(11) P-value = 0.0000

54 .
55 . hausman FE RE, sigmamore

| | Coefficients | | | |
|---------|--------------|-----------|---------------------|-----------------------------|
| | (b) FE | (B) RE | (b-B) Difference | sqrt(diag(V_b-V_B)) S.E. |
| CVT | .0763239 | .0833586 | -.0070348 | .0016293 |
| DLAT | .2305189 | .1046195 | .1258994 | .0172464 |
| ROI | -.3560018 | -.3358143 | -.0201875 | .0052942 |
| FCF | -.0052591 | -.0084991 | .00324 | .0009223 |
| R_FCF | .0271291 | .002262 | .024867 | .0061535 |
| AGE | -.0034684 | -.0041928 | .0007244 | .001019 |
| TAN | .1347559 | .1375275 | -.0027717 | .0111616 |
| RISVT | .0664125 | .0957236 | -.0293111 | .0062575 |
| C_RISVT | -.0671102 | -.0769902 | .00988 | .0020327 |
| T_RISVT | -.037288 | -.0692035 | .0319156 | .0092227 |
| BCCO | -.0336183 | -.0324055 | -.0012129 | .0046499 |

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

```
chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B)
          =      82.21
Prob>chi2 =      0.0000
```

56 .

57 . log close

name: <unnamed>

log: F:\Tese\Tratamento dos dados\Dados\Portugal\Resultados\Dados em painel\Output ET P

> 1

log type: smcl

closed on: 20 Jul 2016, 11:53:46

58 .