UNIVERSIDADE CATÓLICA PORTUGUESA

FACULDADE DE CIÊNCIAS ECONÓMICAS E EMPRESARIAIS

Cursos de Economia e Gestão
Econometria

Mini-teste Dezembro de 2010
Duração: *30 minutos*
Nada sendo indicado deverá utilizar um nível de significância de 0.05

Nome: **Número:**

Em **anexo** encontram-se os resultados da estimação de um modelo que tem por objectivo analisar as despesas mensais em saúde (*Y*) das famílias de um determinado país em função do rendimento anual dessas famílias (*R*), do número de filhos (*F*) e de uma variável que é igual a 1 se a família vive num centro urbano e igual a zero, caso contrário (*D*). Na amostra seleccionada, a variável *Y* está em euros e a variável *R* em centenas de euros.

a) Explique o que se pretende com as equações 1, 2 e 3 no output do TSP.

b) Em função dos resultados a que chegou em a), explique o que se pretende com as equações 4 e 5 no output do TSP. Interprete os coeficientes estimados no contexto da equação 4.

ANEXO

```
PROGRAM
COMMAND  ************************************************************
1  OPTIONS CRT;
2  SMPL 1 100;
3  READ (file='F:\Data.xls') Y R F D;
4
4  OLSQ Y C R F D;
5  E2=@RES^2;
6  R2=R^2;
7  F2=F^2;
8  RF=R*F;
9  RD=R*D;
10 FD=F*D;
10
11 OLSQ E2 C R F D R2 F2 RF RD FD;
8  OLSQ (ROBUSTSE,HCTYPE=1) Y C R F D;
9
9  LY=LOG(Y);
10 LR=LOG(R);
11 OLSQ LY C LR F D;
12 E2=@RES^2;
13 LYE=@FIT;
14 LYE2=LYE^2;
15 OLSQ E2 C LYE LYE2;
         EXECUTION
************************************************************************

Current sample:  1 to 100

                              Equation   1
                              ============
             Method of estimation = Ordinary Least Squares

Dependent variable: Y
Current sample:  1 to 100
Number of observations:  100

Sum of squared residuals = 2242.512
   Variance of residuals = 113.9748
Std. error of regression = 10.6759       F (zero slopes) = 6.55841 [.000]
               R-squared = .17009
      Adjusted R-squared = .14415

           Estimated    Standard
Variable  Coefficient     Error       t-statistic   P-value
C         97.39896      3.863172       25.21217     [.000]
R         .048717        .018643       2.613147     [.010]
F         39.74978      17.96329       2.212834     [.029]
D         4.481669      2.337796       1.917049     [.058]
```

Equation 2
==========
Method of estimation = Ordinary Least Squares

Dependent variable: E2
Current sample: 1 to 100
Number of observations: 100

Mean of dep. var. =	.212811	LM het. test =	7.56230
Std. dev. of dep. var. =		Durbin-Watson =	2.05282
Sum of squared residuals =		Jarque-Bera test =	39.0270
Variance of residuals =		Ramsey's RESET2 =	.155973
Std. error of regression =		F (zero slopes) =	8.59075
R-squared =		Schwarz B.I.C. =	575.425

Variable	Estimated Coefficient	Standard Error	t-statistic
C	-.113252E+07	984698.	-1.15012
R	58.7810	15.2316	3.85915
F	-.119329E-03	.338823E-04	-3.52186
D	.189328E-02	.488723E-03	3.87393
R2	-.129328E-03	.359823E-04	-3.59424
F2	-.359374E-03	.799842E-04	-4.49307
RF	.219183E-03	.759830E-04	2.88463
RD	.445148E-02	.989554E-03	4.49847
FD	-.139327E-03	.358942E-04	-3.88162

Current sample: 1 to 100

Equation 3
==========
Method of estimation = Ordinary Least Squares

Dependent variable: Y
Current sample: 1 to 100
Number of observations: 100

Sum of squared residuals =	2242.512		
Variance of residuals =	113.9748		
Std. error of regression =	10.6759	F (zero slopes) =	6.55841 [.000]
R-squared =	.17009		
Adjusted R-squared =	.14415		

Variable	Estimated Coefficient	Standard Error	t-statistic
C	97.39896	3.158923	30.83296
R	.048717	.017642	2.761422
F	39.74978	16.36325	2.429211
D	4.481669	1.997795	2.243307

Standard Errors are heteroskedastic-consistent (HCTYPE=1).

Current sample: 1 to 100

Equation   4
==========

Method of estimation = Ordinary Least Squares

Dependent variable: LY
Current sample: 1 to 100
Number of observations: 100

Sum of squared residuals = 2.425121
   Variance of residuals = 0.025261
Std. error of regression = 0.158939   F (zero slopes) = 13.6317
               R-squared = .298734

Variable	Estimated Coefficient	Standard Error	t-statistic	P-value
C	3.39877	0.879543	3.864245	[.000]
LR	.105871	.028643	3.696226	[.000]
F	0.07839	0.024595	3.187322	[.002]
D	0.03754	0.012894	2.911432	[.004]

Equation   5
==========

Method of estimation = Ordinary Least Squares

Dependent variable: E2
Current sample: 1 to 100
Number of observations: 100

Sum of squared residuals = 4.40504
   Variance of residuals = 0.04541
Std. error of regression = .213114   F (zero slopes) =
               R-squared = .029688

Variable	Estimated Coefficient	Standard Error	t-statistic	P-value
C	-.272556	2.32289	-.117335	[.907]
LYE	.175952	.601179	.292679	[.772]
LYE2	-.014378	.038336	-.375054	[.710]

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