

(R)
Statistics/Data Analysis

User: assignment 2 ex 2

(R)
Statistics/Data Analysis 12.0
Special Edition

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Notes:

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

Checking for updates...

(contacting <http://www.stata.com>)

bad serial number

unable to check for update; verify Internet settings are correct.

```
1 . *(9 variables, 136 observations pasted into data editor)
2 . do "C:\Users\WILLIA~1\AppData\Local\Temp\STD00000000.tmp"
3 . cd "C:\Users\William Li\Documents\Uni Marburg 2.0\WS18 Macroeconomics\Tutorial\Assignment 2\"
  C:\Users\William Li\Documents\Uni Marburg 2.0\WS18 Macroeconomics\Tutorial\Assignment 2
4 .
5 . log using "Assignment 2 ex 2", replace

      name: <unnamed>
      log:  C:\Users\William Li\Documents\Uni Marburg 2.0\WS18 Macroeconomics\Tutorial\Assignment
      log type: smcl
      opened on: 6 Jan 2019, 23:16:40

6 .
  end of do-file

7 . do "C:\Users\WILLIA~1\AppData\Local\Temp\STD00000000.tmp"

8 .
9 . /**use assignment_ifm.dta, clear**
10 . ***we couldn't open the above file directly from STATA,
11 . ***so we used R studio to open the file and copy and paste onto 1)ms excel then 2) STATA
12 .
13 . //2a
14 . gen time2=tq(1973q1)+_n-1

15 . format time2 %tq

16 . tsset time2, quarterly
      time variable: time2, 1973q1 to 2006q4
      delta: 1 quarter
```

```

17 . //2b
18 . tsline s ll.f

19 . //test the unbiasedness Hypothesis//
20 . reg s ll.f

```

Source	SS	df	MS	Number of obs =	135
Model	3.1785182	1	3.1785182	F(1, 133) =	3318.99
Residual	.127371089	133	.000957677	Prob > F =	0.0000
Total	3.30588929	134	.024670816	R-squared =	0.9615
				Adj R-squared =	0.9612
				Root MSE =	.03095

s	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
f						
L1.	.9837288	.0170755	57.61	0.000	.9499542	1.017503
_cons	.0121465	.0095768	1.27	0.207	-.0067959	.031089

```

21 . reg s ll.f i_us i_uk infl_us infl_uk

```

Source	SS	df	MS	Number of obs =	135
Model	3.20353266	5	.640706533	F(5, 129) =	807.48
Residual	.10235663	129	.000793462	Prob > F =	0.0000
Total	3.30588929	134	.024670816	R-squared =	0.9690
				Adj R-squared =	0.9678
				Root MSE =	.02817

s	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
f						
L1.	.9407016	.0254366	36.98	0.000	.8903748	.9910285
i_us	-.0082065	.0015371	-5.34	0.000	-.0112478	-.0051652
i_uk	.0047159	.0012882	3.66	0.000	.002167	.0072647
infl_us	.0057949	.0021562	2.69	0.008	.0015287	.0100611
infl_uk	-.0009764	.0008036	-1.22	0.227	-.0025663	.0006135
_cons	.0235906	.0129368	1.82	0.071	-.0020052	.0491865

```

22 . test _cons=0

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```

( 1)  _cons = 0

```

```

      F( 1, 129) =    3.33
      Prob > F =    0.0705

```

```

23 . test ll.f=1

```

```

( 1)  L.f = 1

```

```

      F( 1, 129) =    5.43
      Prob > F =    0.0213

```

24 . test (_cons = 0) (l1.f = 1)

(1) **_cons = 0**
(2) **L.f = 1**

F(2, 129) = **2.76**
Prob > F = **0.0670**

25 . estat bgodfrey, lags(4)

Breusch-Godfrey LM test for autocorrelation

lags(p)	chi2	df	Prob > chi2
4	2.661	4	0.6161

H0: no serial correlation

26 . //2c

27 . gen s_l=log(s)

28 . reg s_l

Source	SS	df	MS	Number of obs =	136
Model	0	0	.	F(0, 135) =	0.00
Residual	13.437073	135	.099533874	Prob > F =	.
Total	13.437073	135	.099533874	R-squared =	0.0000
				Adj R-squared =	0.0000
				Root MSE =	.31549

s_l	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
_cons	-.6531772	.027053	-24.14	0.000	-.7066797 - .5996746

29 . //alternatively//

30 . dfuller s, lag(4) trend regress

Augmented Dickey-Fuller test for unit root Number of obs = **131**

Test Statistic	Interpolated Dickey-Fuller		
	1% Critical Value	5% Critical Value	10% Critical Value
Z(t)	-2.500	-4.030	-3.446
			-3.146

MacKinnon approximate p-value for Z(t) = **0.3280**

D.s	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
s					
L1.	-.0786003	.0314406	-2.50	0.014	-.1408301 - .0163706
L2.	.2471596	.0882418	2.80	0.006	.0725043 .4218148
L3D.	-.0174137	.0908429	-0.19	0.848	-.1972172 .1623898
L4D.	.0909026	.0903998	1.01	0.317	-.0880239 .269829
L4D.	.0470945	.0892157	0.53	0.599	-.1294884 .2236775
_trend	-.0000396	.0001221	-0.32	0.746	-.0002812 .000202
_cons	.0441305	.0227587	1.94	0.055	-.0009153 .0891763

```

31 . //2d
32 . gen diffs = f.s-s
    (1 missing value generated)

33 . gen diffs1 = s-L1.s
    (1 missing value generated)

34 . gen diffs2 = d.s
    (1 missing value generated)

35 . gen diffr = i_us - i_uk

36 . reg diffs diffr

```

Source	SS	df	MS	Number of obs =	135
Model	.01055828	1	.01055828	F(1, 133) =	5.09
Residual	.276110161	133	.002076016	Prob > F =	0.0258
				R-squared =	0.0368
				Adj R-squared =	0.0296
Total	.286668441	134	.002139317	Root MSE =	.04556

diffs	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
diffr	-.0040889	.0018131	-2.26	0.026	-.0076751	-.0005026
_cons	-.0117984	.0059454	-1.98	0.049	-.0235582	-.0000386

```

37 .
38 . test _cons=0

    ( 1)  _cons = 0

            F( 1, 133) =    3.94
            Prob > F =    0.0493

```

```

39 . test diffr=1

    ( 1)  diffr = 1

            F( 1, 133) =  3.1e+05
            Prob > F =    0.0000

```

```

40 . test (_cons=0)(diffr=1)

    ( 1)  _cons = 0
    ( 2)  diffr = 1

            F( 2, 133) =  3.5e+05
            Prob > F =    0.0000

```

```

41 . estat bgodfrey, lags(4)

```

Breusch-Godfrey LM test for autocorrelation

lags(p)	chi2	df	Prob > chi2
4	7.415	4	0.1155

H0: no serial correlation

```

42 .
    end of do-file

```

```

43 .

```