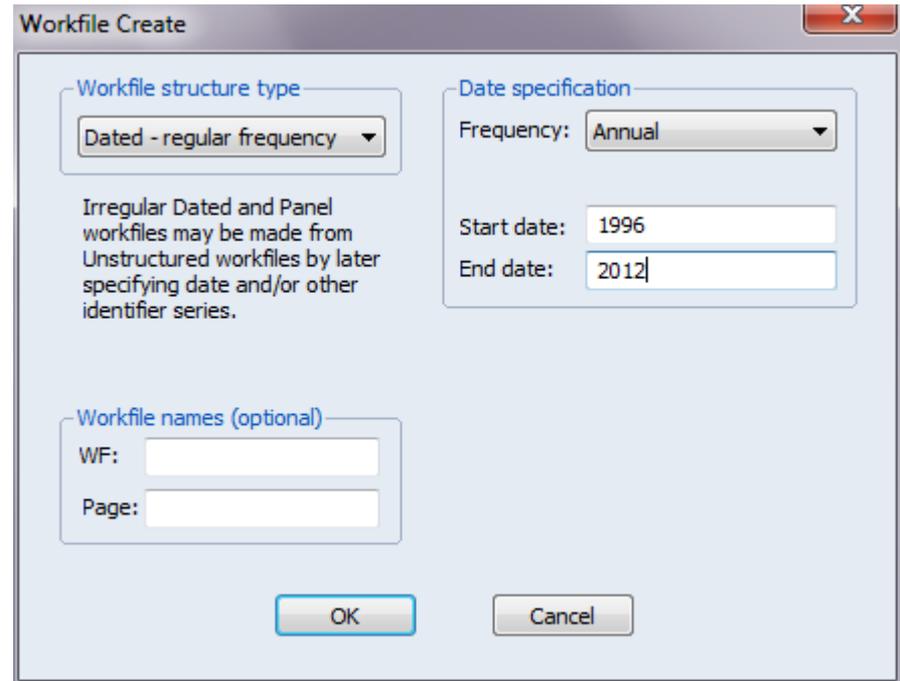


Work with EViews

Ass.Prof. Andriy Stavvytskyy

Creating a Workfile

- ▶ To create a new workfile, select **File/New/Workfile...** from the main menu to open the **Workfile Create** dialog



Workfile Create

Workfile structure type
Dated - regular frequency

Irregular Dated and Panel workfiles may be made from Unstructured workfiles by later specifying date and/or other identifier series.

Date specification
Frequency: Annual
Start date: 1996
End date: 2012

Workfile names (optional)
WF:
Page:

OK Cancel

Date specification

- ▶ When you select **Dated – regular frequency**, EViews will prompt you to select a frequency for your data. You may choose between the standard EViews supported date frequencies (**Multi-year, Annual, Semi-annual, Quarterly, Monthly, Bimonthly, Fortnight, Ten-day, Weekly, Daily – 5 day week, Daily – 7 day week, Daily – custom week, Intraday**), and a special frequency (**Integer date**) which is a generalization of a simple enumeration.
- ▶ For non-annual dates the “:” separator is used.

Date specification

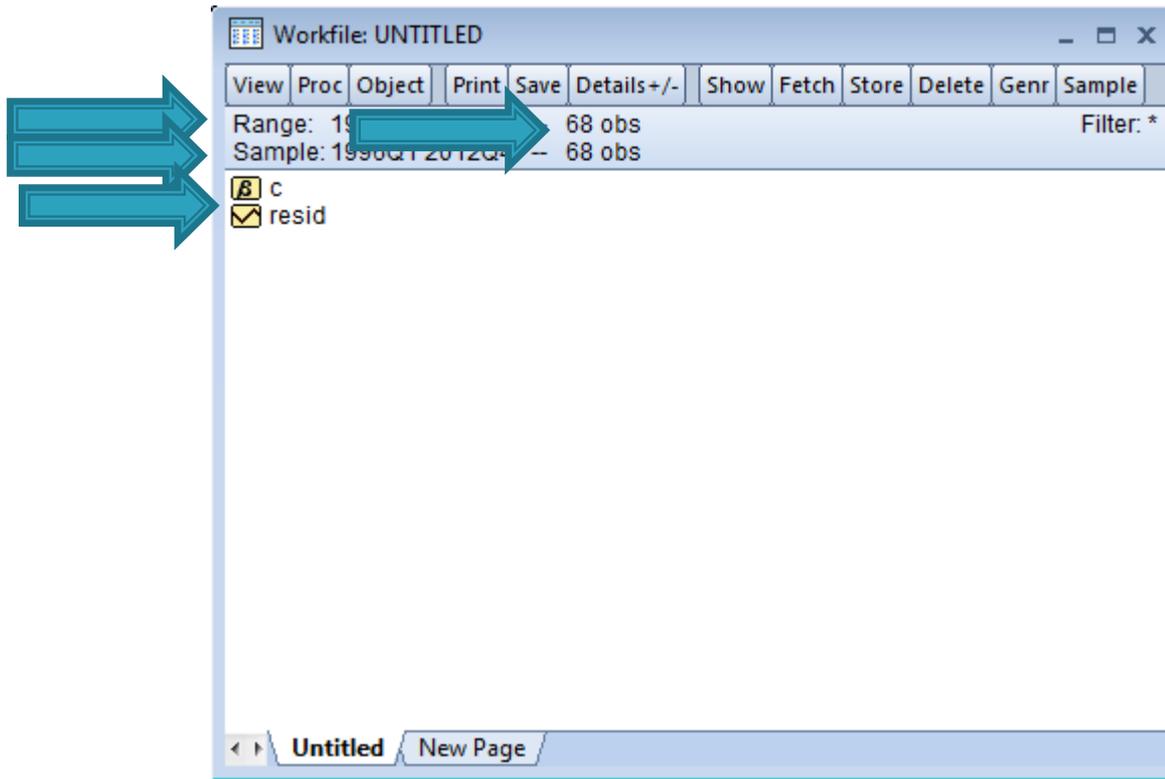
Frequency: Annual

Start date:

End date:

- Multi-year
- Annual
- Semi-annual
- Quarterly
- Monthly
- Bimonthly
- Fortnight
- Ten-day (Trimonthly)
- Weekly
- Daily - 5 day week
- Daily - 7 day week
- Daily - custom week
- Intraday
- Integer date

Workfile



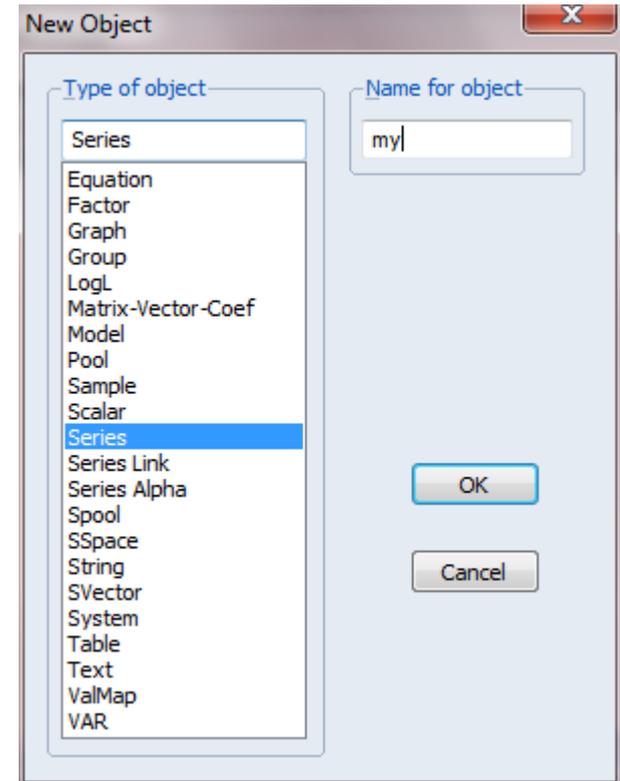
Creating an object

- ▶ Information in EViews is stored in *objects*.
- ▶ The most common objects in EViews are series and equation objects.
- ▶ Menu **Object/New Object...**

	Alpha		Matrix		Spool		Text
	Coef		Model		Sspace		Valmap
	Equation		Pool		String		Var
	Factor		Rowvector		Svector		Vector
	Graph		Sample		Sym		
	Group		Scalar		System		
	Logl		Series		Table		

Creating a variable

- ▶ *Object*→*New Object...*
- ▶ **series my**



Working with Objects

- ▶ Naming Objects
 - ▶ Labelling Objects
 - ▶ Freezing Objects
 - ▶ Deleting Objects
 - ▶ Editing Series
 - ▶ Grouping Series
 - ▶ Viewing Series
- 

Importing data: txt-file - 1

- ▶ File: oxford.txt
- ▶ Workfile: integer date, 1:40
- ▶ Menu **File/Import/Read...**

Importing data: txt-file - 2

ASCII Text Import

Name for series or Number if named in file
sex height sib dist deg count

Data order
 in Columns
 in Rows

Rectangular file layout
 File laid out as rectangle
Columns to skip: 1
Rows to skip: 0
Comment character:

Series headers
of headers (including names) before data: 10

Delimiters
 Treat multiple delimiters as one
 Tab
 Comma
 Space
 Alpha (A-Z)
 Custom:

Miscellaneous
 Quote with single ' not '"
 Drop strings - don't make NA
 Numbers in (..) are negative
 Allow commas in numbers
Currency:
Text for NA: NA

Import sample
1 40
Reset sample to:
 Current sample
 Workfile range
 To end of range

Preview - First 16K of file:
Table A. Data set for a random sample of 40 students
N - Student reference number
SEX - Sex (1 = Male, 2 = Female)
HEIGHT - Height (cm)
SIB - Number of Siblings
DIST - Distance from home to Oxford (km)

OK
Cancel

Importing data: xls-file - 1

	A	B	C	D	E	F	G
1	Table B. Data set for a random sample of 40 students						
2	N - Student reference number						
3	SEX - Sex (1 = Male, 2 = Female)						
4	HEIGHT - Height (cm)						
5	DIST- Distance from home to Oxford (km)						
6	COUNT - A-level count						
7	N	SEX	HEIGHT	DIST	COUNT		
8		1	183	80	6		
9	2	2	163	3	32		
10	3	2	152	90	22		
11	4	2	157	272	12		
12	5	2	157	80	12		
13	6	2	165	8	18		
14	7	1	173	485	14		
15	8	1	180	176	8		
16	9	2	164	10	6		
17	10	2	160	72	18		

Importing data: xls-file - 2

- ▶ File: oxford.xls
- ▶ Important!!! **Close xls file!**
- ▶ Workfile: integer date, 1:40
- ▶ Menu **File/Import/Read...**

Importing data: xls-file - 3

The image shows a dialog box titled "Excel Spreadsheet Import" with a close button (X) in the top right corner. The dialog is divided into several sections:

- Data order:** Two radio buttons are present. The first, "By Observation - series in columns", is selected and circled in red. The second is "By Series - series in rows".
- Upper-left data cell:** A text input field containing "B8" is circled in red.
- Excel 5+ sheet name:** An empty text input field.
- Names for series (Number if named in file):** A list box containing the text "SEX HEIGHT DIST COUNT" is circled in red.
- Import sample:** A text input field containing "1 40" and a vertical scrollbar.
- Reset sample to:** Three radio buttons: "Current sample", "Workfile range", and "To end of range".
- Write date/obs:** A checked checkbox with three radio options: "EViews date format", "First calendar day", and "Last calendar day".
- Write series names:** An unchecked checkbox.

At the bottom right, there are "OK" and "Cancel" buttons.

File: Cobb.txt

- ▶ Y – index of industrial production
 - ▶ K – index of capital
 - ▶ L – index of labour
- 

Import data - 1

- ▶ File - New - Workfile

Workfile Create

Workfile structure type

Dated - regular frequency

Irregular Dated and Panel workfiles may be made from Unstructured workfiles by later specifying date and/or other identifier series.

Date specification

Frequency: Annual

Start date: 1899

End date: 1922

Workfile names (optional)

WF:

Page:

OK Cancel

Import data - 2

- ▶ File-import-read - filename

The screenshot shows the 'ASCII Text Import' dialog box. Several fields are circled in red: 'YKL' in the 'Name for series or Number if named in file' field, 'in Columns' in the 'Data order' section, '1' in the 'Columns to skip' field, '1899 1922' in the 'Import sample' field, and 'Tab' in the 'Delimiters' section.

Name for series or Number if named in file: YKL

Data order: in Columns, in Rows

Rectangular file layout: File laid out as rectangle, Columns to skip: 1, Rows to skip: 0, Comment character:

Series headers: # of headers (including names) before data: 1

Delimiters: Treat multiple delimiters as one, Tab, Comma, Space, Alpha (A-Z), Custom:

Import sample: 1899 1922

Reset sample to: Current sample, Workfile range, To end of range

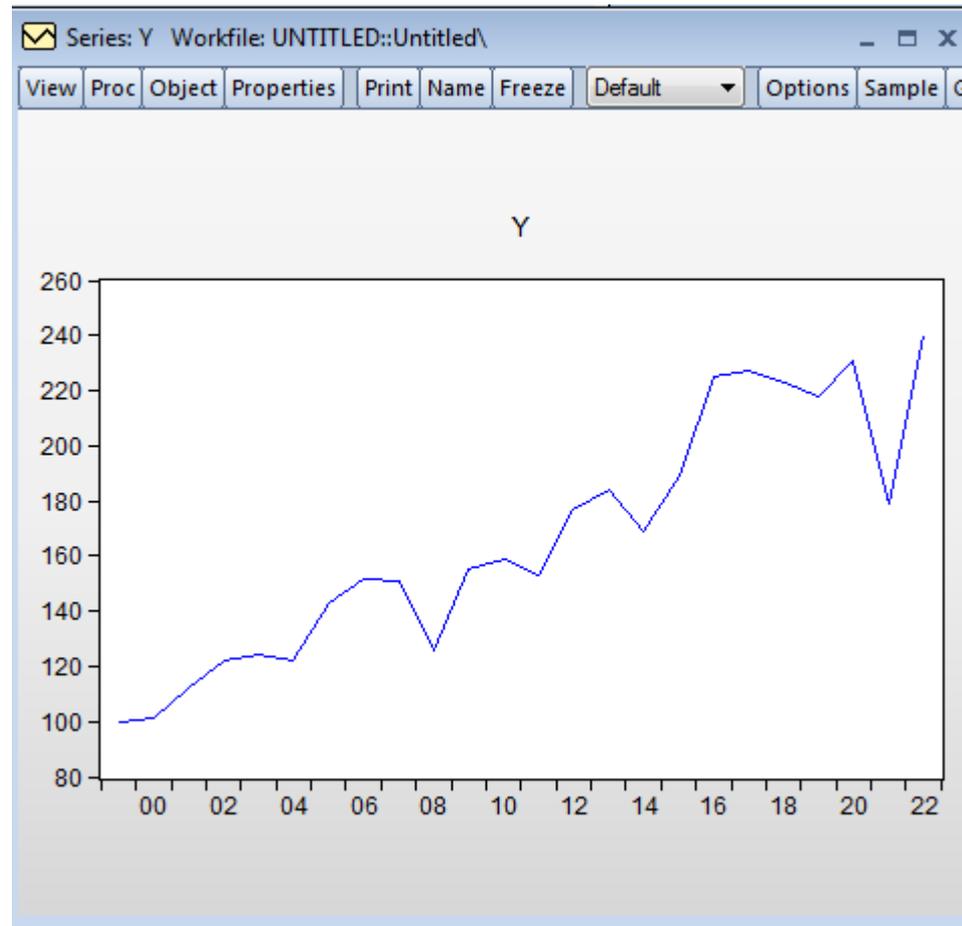
Miscellaneous: Quote with single ' not ", Drop strings - don't make NA, Numbers in (..) are negative, Allow commas in numbers, Currency: , Text for NA: NA

Preview - First 16K of file:

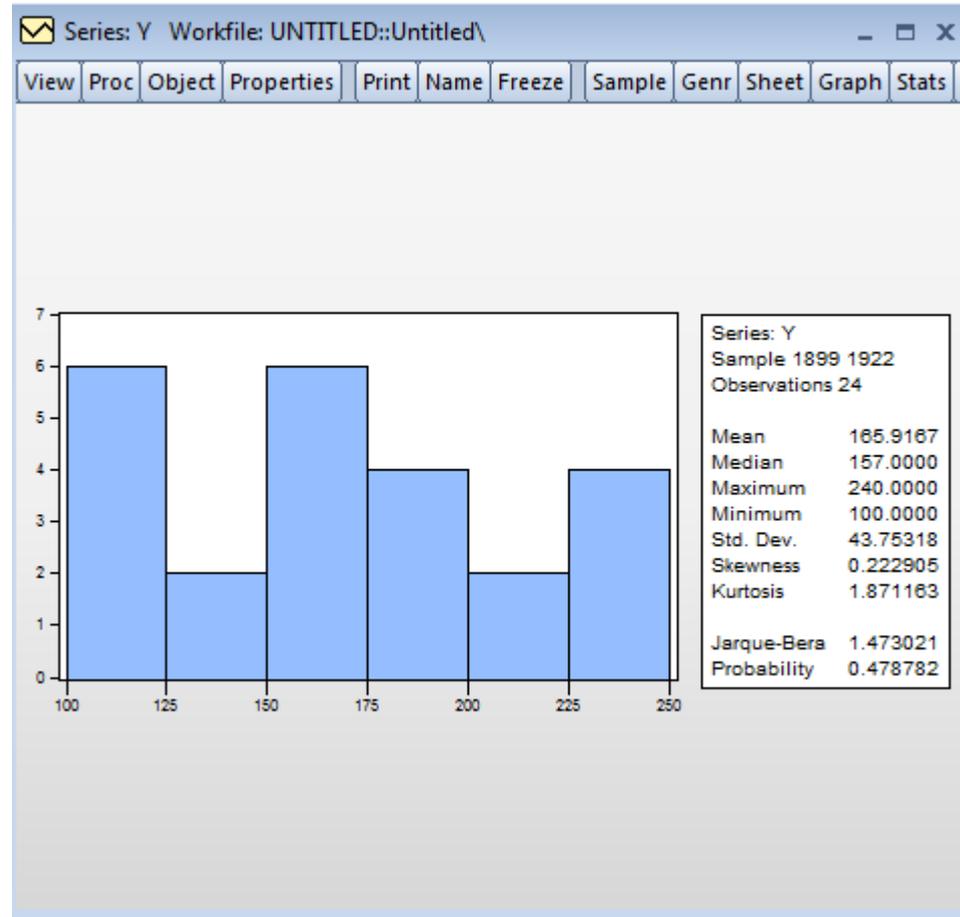
Year	Y	K	L
1899	100	100	100
1900	101	107	105
1901	112	114	110
1902	122	122	118
1903	124	131	123

Buttons: OK, Cancel

Variable-View-Graph-Line



Variable-View-Descriptive statistics-histogram



Variable-View-Unit Root Test – 1

Unit Root Test

Test type
Augmented Dickey-Fuller

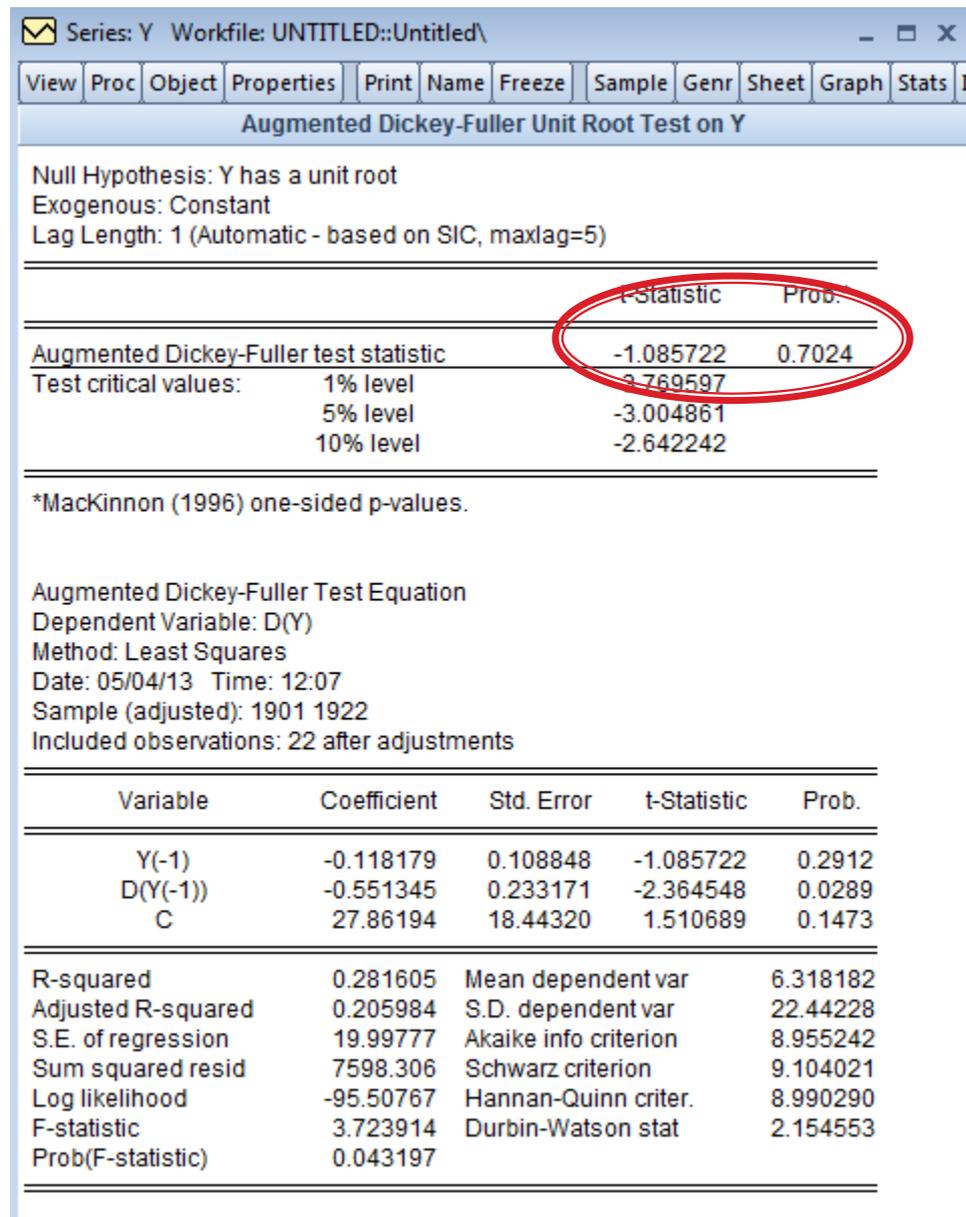
Test for unit root in
 Level
 1st difference
 2nd difference

Include in test equation
 Intercept
 Trend and intercept
 None

Lag length
 Automatic selection:
Schwarz Info Criterion
Maximum lags: 5
 User specified: 1

OK Cancel

Variable-View- Unit Root Test -2



Cobb–Douglas model estimation – 1

$$Y_t = a_0 K_t^{a_1} L_t^{a_2} + \varepsilon_t$$

$$\ln Y_t = \ln a_0 + a_1 \ln K_t + a_2 \ln L_t + \varepsilon_t$$

$$y_t = \beta_0 + \beta_1 x_{1t} + \beta_2 x_{2t} + \varepsilon_t$$

Quick – estimate equation

Equation Estimation

Specification Options

Equation specification

Dependent variable followed by list of regressors including ARMA and PDL terms, OR an explicit equation like $Y=c(1)+c(2)*X$.

log(y) c log(k) log(l)

Estimation settings

Method: LS - Least Squares (NLS and ARMA)

Sample: 1899 1922

OK Скасувати

Note

Generate Series by Equation X

Enter equation

`a0=exp(c(1))`

Sample

1899 1922

OK Cancel

Series: A0 Workfile: UNTITLED::Untitled\

View Proc Object Properties Print Name Freeze Default Sort Edit+/- Smpl-

A0

Last updated: 05/04/13 - 11:59
Modified: 1899 1922 // a0=exp(c(1))

1899	3.453486			
1900	3.453486			
1901	3.453486			
1902	3.453486			
1903	3.453486			
1904	3.453486			
1905	3.453486			
1906	3.453486			
1907	3.453486			
1908				

Cobb–Douglas model estimation – 2

$$Y_t = a_0 K_t^{a_1} L_t^{a_2} + \varepsilon_t$$

- ▶ Quick–estimate equation

Equation Estimation

Specification Options

Equation specification

Dependent variable followed by list of regressors including ARMA and PDL terms, OR an explicit equation like $Y=c(1)+c(2)*X$.

$y=c(1)*(k^{(2)})*(l^{(3)})$

Estimation settings

Method: LS - Least Squares (NLS and ARMA)

Sample: 1899 1922

OK Скасувати

Comparison

Equation: EQ01 Workfile: UNTITLED::Untitled\

View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Dependent Variable: LOG(Y)
 Method: Least Squares
 Date: 05/04/13 Time: 11:54
 Sample: 1899 1922
 Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.177310	0.434293	-0.408272	0.6872
LOG(K)	0.233053	0.063530	3.668415	0.0014
LOG(L)	0.807278	0.145076	5.564513	0.0000

R-squared	0.957425	Mean dependent var	5.077336
Adjusted R-squared	0.953370	S.D. dependent var	0.269234
S.E. of regression	0.058138	Akaike info criterion	-2.735511
Sum squared resid	0.070982	Schwarz criterion	-2.588254
Log likelihood	35.82613	Hannan-Quinn criter.	-2.696444
F-statistic	236.1219	Durbin-Watson stat	1.523452
Prob(F-statistic)	0.000000		

Equation: EQ02 Workfile: UNTITLED::Untitled\

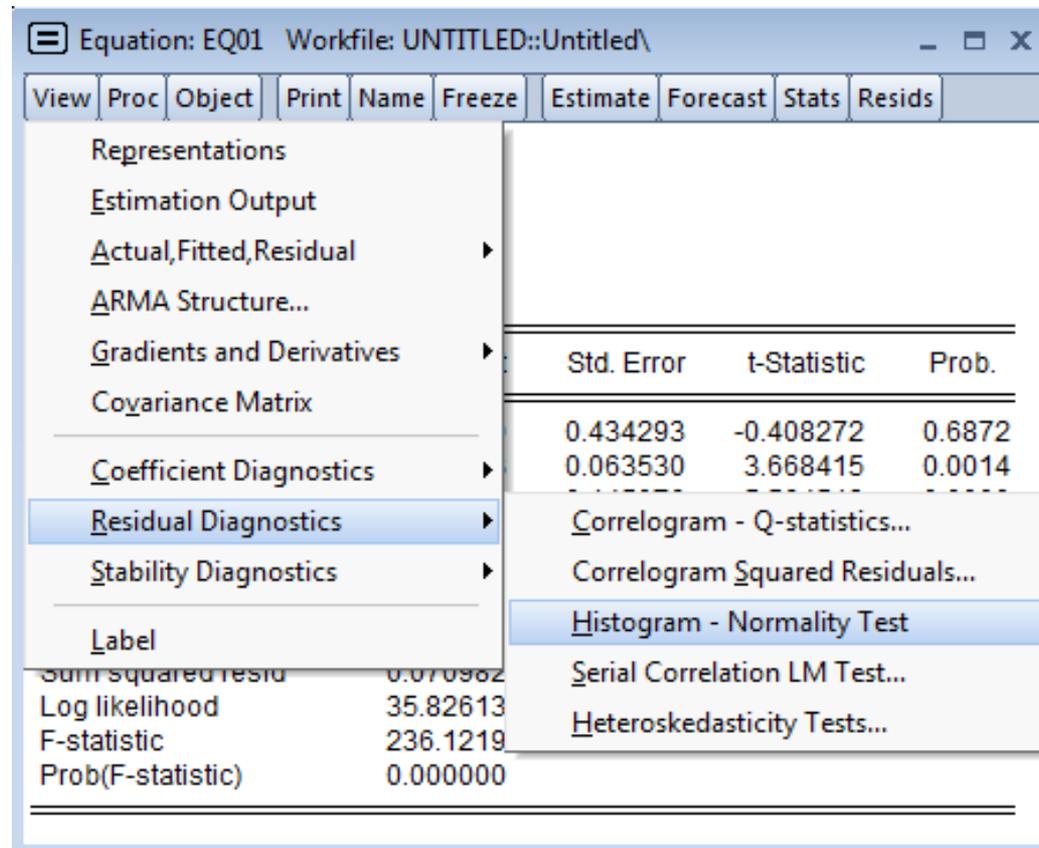
View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Dependent Variable: Y
 Method: Least Squares
 Date: 05/04/13 Time: 12:00
 Sample: 1899 1922
 Included observations: 24
 Convergence achieved after 1 iteration
 $Y=C(1)*(K^C(2))*(L^C(3))$

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	1.239384	0.539703	2.296417	0.0320
C(2)	0.267819	0.062640	4.275508	0.0003
C(3)	0.691480	0.138238	5.002098	0.0001

R-squared	0.942326	Mean dependent var	165.9167
Adjusted R-squared	0.936833	S.D. dependent var	43.75318
S.E. of regression	10.99653	Akaike info criterion	7.749505
Sum squared resid	2539.396	Schwarz criterion	7.896762
Log likelihood	-89.99406	Hannan-Quinn criter.	7.788572
Durbin-Watson stat	1.632557		

Test for residuals normality – 1

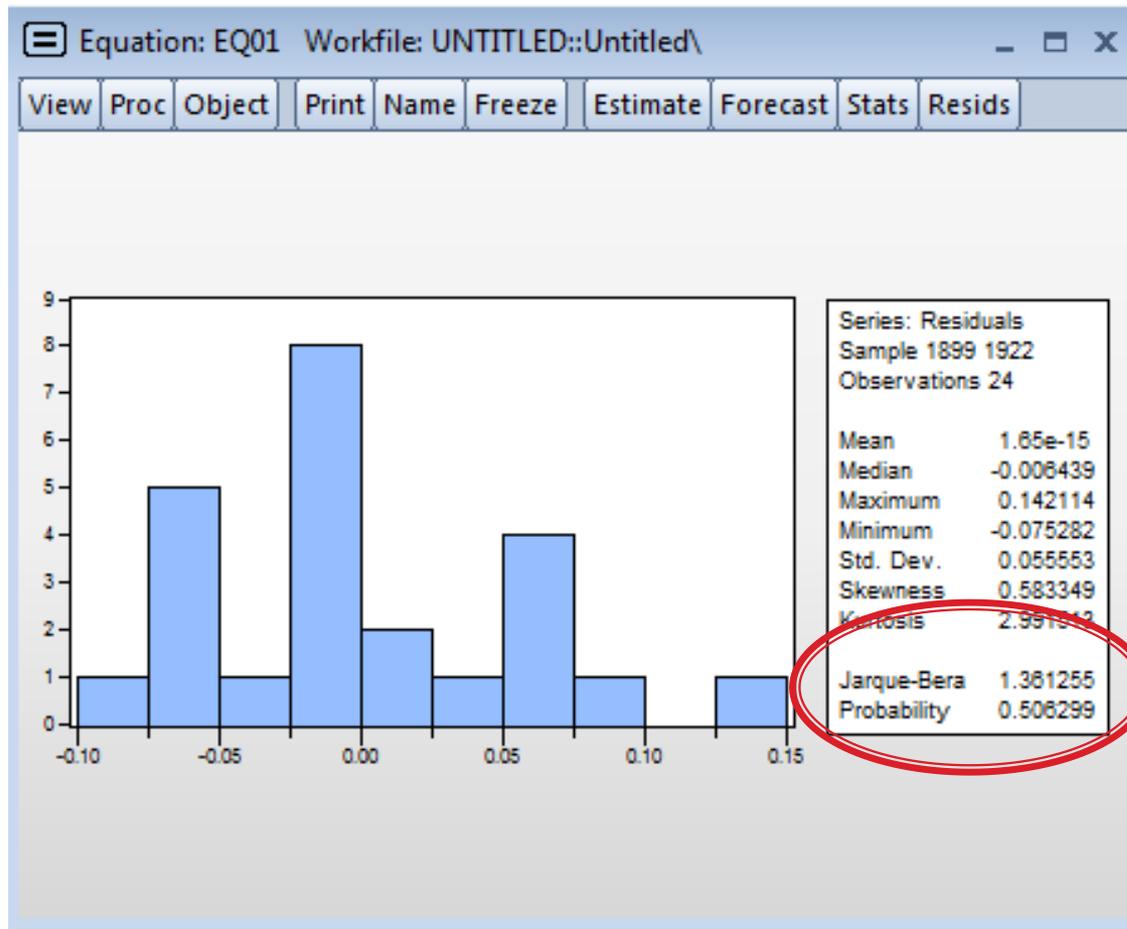


The screenshot shows the EViews software interface. The title bar reads "Equation: EQ01 Workfile: UNTITLED::Untitled\". The menu bar includes "View", "Proc", "Object", "Print", "Name", "Freeze", "Estimate", "Forecast", "Stats", and "Resids". The "View" menu is open, showing options like "Representations", "Estimation Output", "Actual, Fitted, Residual", "ARMA Structure...", "Gradients and Derivatives", "Covariance Matrix", "Coefficient Diagnostics", "Residual Diagnostics" (highlighted), "Stability Diagnostics", and "Label". A sub-menu for "Residual Diagnostics" is also open, listing "Correlogram - Q-statistics...", "Correlogram Squared Residuals...", "Histogram - Normality Test" (highlighted), "Serial Correlation LM Test...", and "Heteroskedasticity Tests...".

	Std. Error	t-Statistic	Prob.
	0.434293	-0.408272	0.6872
	0.063530	3.668415	0.0014

Sum squared resid	0.070962
Log likelihood	35.82613
F-statistic	236.1219
Prob(F-statistic)	0.000000

Test for residuals normality – 2



Coefficient tests

The screenshot shows the EViews software interface. The title bar reads "Equation: EQ01 Workfile: UNTITLED::Untitled\". The menu bar includes "View", "Proc", "Object", "Print", "Name", "Freeze", "Estimate", "Forecast", "Stats", and "Resids". The "View" menu is open, showing options like "Representations", "Estimation Output", "Actual, Fitted, Residual", "ARMA Structure...", "Gradients and Derivatives", "Covariance Matrix", "Coefficient Diagnostics", "Residual Diagnostics", "Stability Diagnostics", and "Label". The "Coefficient Diagnostics" option is selected, opening a sub-menu with options: "Scaled Coefficients", "Confidence Intervals...", "Confidence Ellipse...", "Variance Inflation Factors", "Coefficient Variance Decomposition", "Wald Test - Coefficient Restrictions..." (highlighted), "Omitted Variables Test - Likelihood Ratio...", "Redundant Variables Test - Likelihood Ratio...", and "Factor Breakpoint Test...".

	Std. Error	t-Statistic	Prob.
	0.434293	-0.408272	0.6872

Label	
Sum squared resid	0.070962
Log likelihood	35.82613
F-statistic	236.1219
Prob(F-statistic)	0.000000

Other tests

- ▶ Omitted variable test
 - ▶ Redundant variable test
 - ▶ Multicollinearity test
 - ▶ Heteroscedasticity test
 - ▶ Autocorrelation test
 - ▶ Stability test
 - ▶ RESET test
- 

Special functions

- ▶ @trend
- ▶ @seas(i)

Questions?



Self study