ESTIMATING

« MULTI-BLOC POLITICAL ECONOMY MODEL »

Eviews 11

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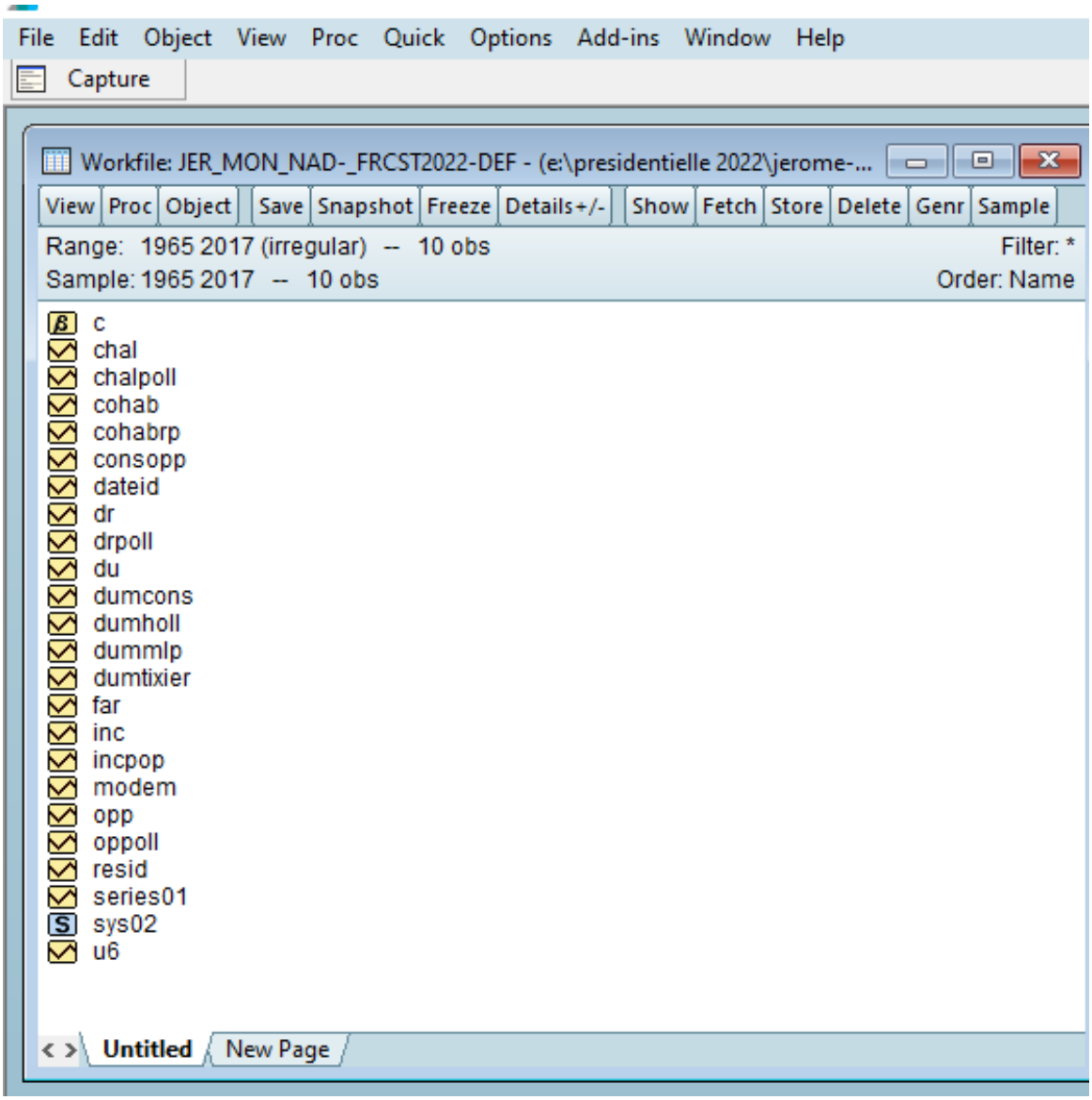
1°) Run OLS individual equations (one at a time)



Command

```
ls inc c u6 incpop cohab
ls opp c du oppoll cohab consopp
ls chal c incpop chalpoll modem dumholl
ls Far c u6 cohabrp dummlp dumtixier dumlp81
ls dr c drpoll dumcons
```

Equation: UNTITLED Workfile: JER_MON_NAD-_FRCST2022...

View | Proc | Object | Print | Name | Freeze | Estimate | Forecast | Stats | Resids

Dependent Variable: INC
Method: Least Squares
Date: 01/26/22 Time: 16:16
Sample: 1965 2017
Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	18.07814	5.164752	3.500292	0.0128
U6	-1.569381	0.532794	-2.945567	0.0258
INCPOP	0.528960	0.090026	5.875616	0.0011
COHAB	-8.867852	3.801550	-2.332694	0.0584

R-squared	0.911368	Mean dependent var	25.96200
Adjusted R-squared	0.867052	S.D. dependent var	12.12604
S.E. of regression	4.421407	Akaike info criterion	6.099967
Sum squared resid	117.2930	Schwarz criterion	6.221001
Log likelihood	-26.49984	Hannan-Quinn criter.	5.967193
F-statistic	20.56514	Durbin-Watson stat	1.872041
Prob(F-statistic)	0.001472		

Equation: UNTITLED Workfile: JER_MON_NAD-_FRCST2022...

View | Proc | Object | Print | Name | Freeze | Estimate | Forecast | Stats | Resids

Dependent Variable: OPP
Method: Least Squares
Date: 01/26/22 Time: 16:24
Sample: 1965 2017
Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	18.73963	3.068378	6.107338	0.0017
DU	8.878191	2.655235	3.343655	0.0205
OPPOLL	0.599907	0.081829	7.331208	0.0007
COHAB	3.758146	1.627994	2.308452	0.0690
CONSOPP	-9.031444	2.016335	-4.479138	0.0065

R-squared	0.969340	Mean dependent var	38.80500
Adjusted R-squared	0.944813	S.D. dependent var	9.407754
S.E. of regression	2.210070	Akaike info criterion	4.730778
Sum squared resid	24.42205	Schwarz criterion	4.882071
Log likelihood	-18.65389	Hannan-Quinn criter.	4.564811
F-statistic	39.52015	Durbin-Watson stat	1.679276
Prob(F-statistic)	0.000563		

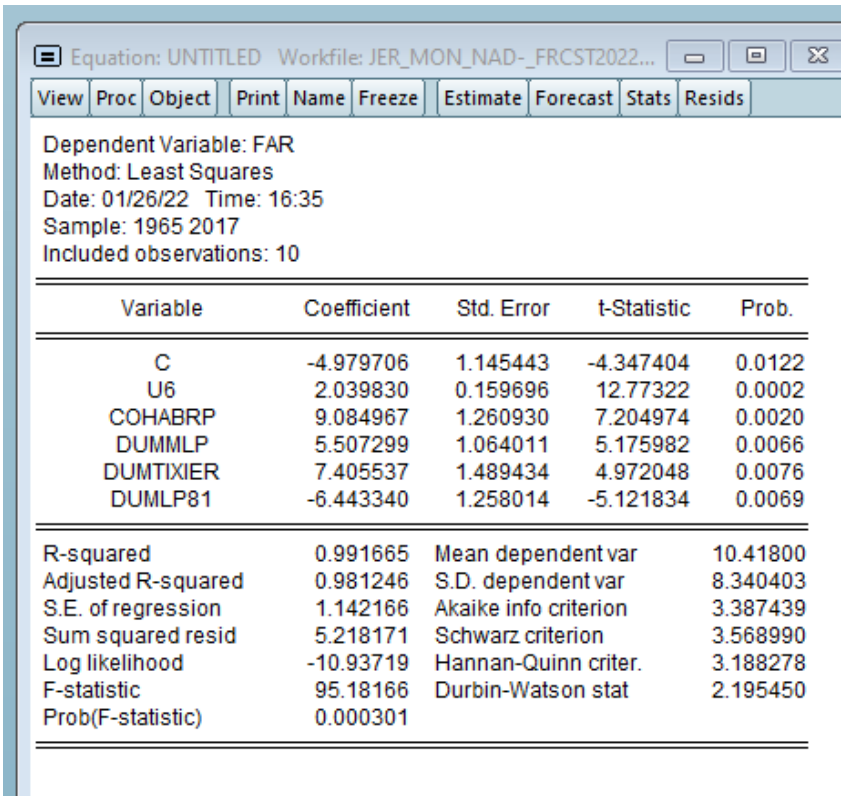
Equation: UNTITLED Workfile: JER_MON_NAD-_FRCST2022...

View | Proc | Object | Print | Name | Freeze | Estimate | Forecast | Stats | Resids

Dependent Variable: CHAL
Method: Least Squares
Date: 01/26/22 Time: 16:29
Sample: 1965 2017
Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	26.08734	3.318417	7.861382	0.0005
INCPOP	-0.215299	0.047566	-4.526272	0.0062
CHALPOLL	0.203958	0.097512	2.091618	0.0907
MODEM	-12.62483	2.439975	-5.174164	0.0035
DUMHOLL	15.55334	2.970396	5.236116	0.0034

R-squared	0.973906	Mean dependent var	22.19300
Adjusted R-squared	0.953031	S.D. dependent var	10.09452
S.E. of regression	2.187707	Akaike info criterion	4.710438
Sum squared resid	23.93032	Schwarz criterion	4.861731
Log likelihood	-18.55219	Hannan-Quinn criter.	4.544471
F-statistic	46.65438	Durbin-Watson stat	1.823516
Prob(F-statistic)	0.000378		



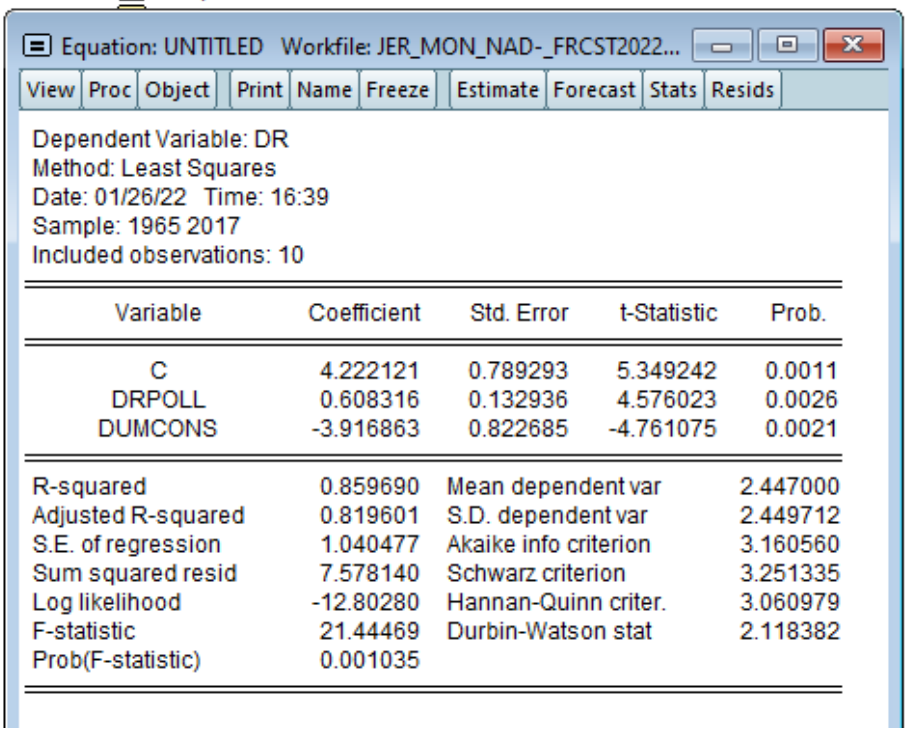
Equation: UNTITLED Workfile: JER_MON_NAD-_FRCST2022...

View | Proc | Object | Print | Name | Freeze | Estimate | Forecast | Stats | Resids

Dependent Variable: FAR
Method: Least Squares
Date: 01/26/22 Time: 16:35
Sample: 1965 2017
Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.979706	1.145443	-4.347404	0.0122
U6	2.039830	0.159696	12.77322	0.0002
COHABRP	9.084967	1.260930	7.204974	0.0020
DUMMLP	5.507299	1.064011	5.175982	0.0066
DUMTIXIER	7.405537	1.489434	4.972048	0.0076
DUMLP81	-6.443340	1.258014	-5.121834	0.0069

R-squared	0.991665	Mean dependent var	10.41800
Adjusted R-squared	0.981246	S.D. dependent var	8.340403
S.E. of regression	1.142166	Akaike info criterion	3.387439
Sum squared resid	5.218171	Schwarz criterion	3.568990
Log likelihood	-10.93719	Hannan-Quinn criter.	3.188278
F-statistic	95.18166	Durbin-Watson stat	2.195450
Prob(F-statistic)	0.000301		



Equation: UNTITLED Workfile: JER_MON_NAD-_FRCST2022...

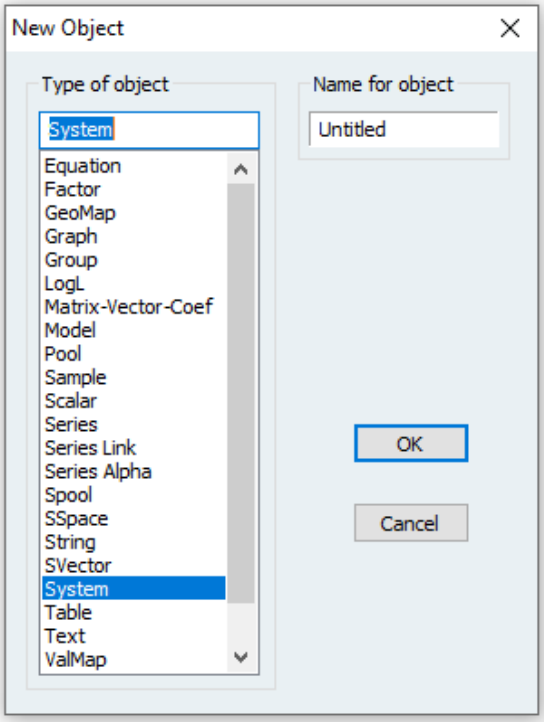
View | Proc | Object | Print | Name | Freeze | Estimate | Forecast | Stats | Resids

Dependent Variable: DR
Method: Least Squares
Date: 01/26/22 Time: 16:39
Sample: 1965 2017
Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.222121	0.789293	5.349242	0.0011
DRPOLL	0.608316	0.132936	4.576023	0.0026
DUMCONS	-3.916863	0.822685	-4.761075	0.0021

R-squared	0.859690	Mean dependent var	2.447000
Adjusted R-squared	0.819601	S.D. dependent var	2.449712
S.E. of regression	1.040477	Akaike info criterion	3.160560
Sum squared resid	7.578140	Schwarz criterion	3.251335
Log likelihood	-12.80280	Hannan-Quinn criter.	3.060979
F-statistic	21.44469	Durbin-Watson stat	2.118382
Prob(F-statistic)	0.001035		

2°) Building SUR system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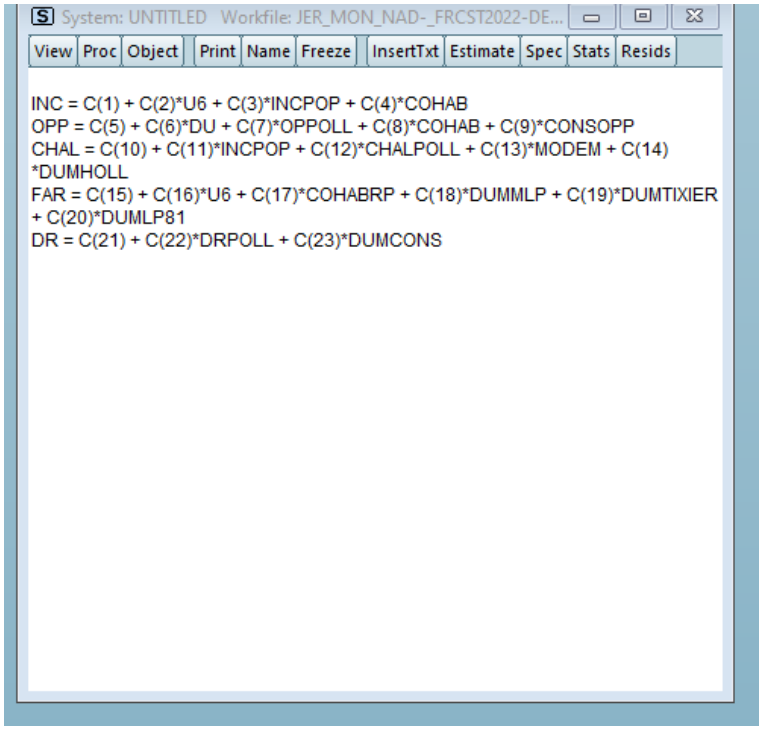
Type of object
System
Equation
Factor
GeoMap
Graph
Group
LogL
Matrix-Vector-Coef
Model
Pool
Sample
Scalar
Series
Series Link
Series Alpha
Spool
SSpace
String
SVector
System
Table
Text
ValMap
Name for object
Untitled
OK
Cancel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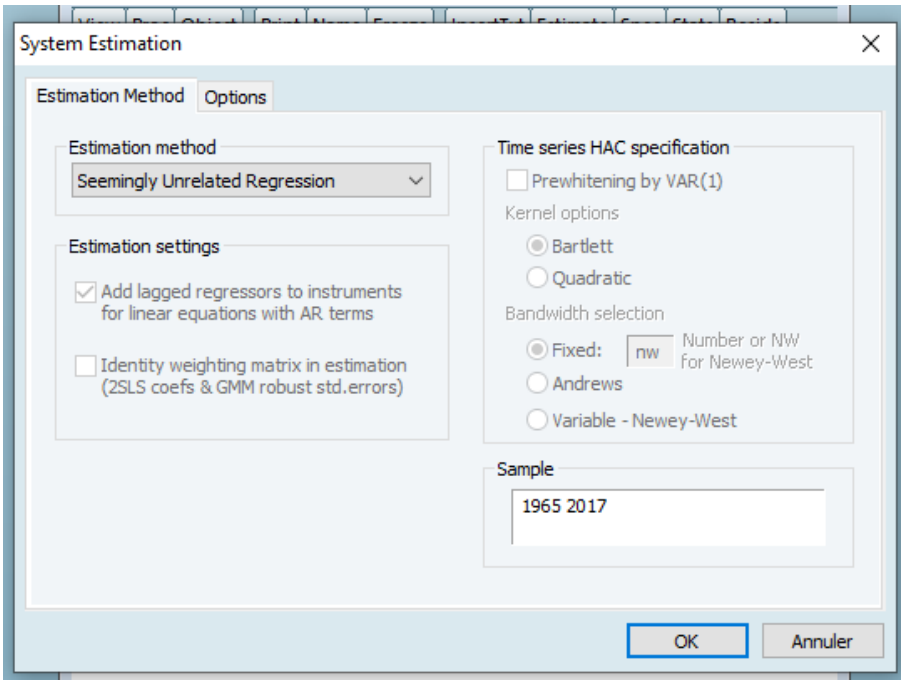
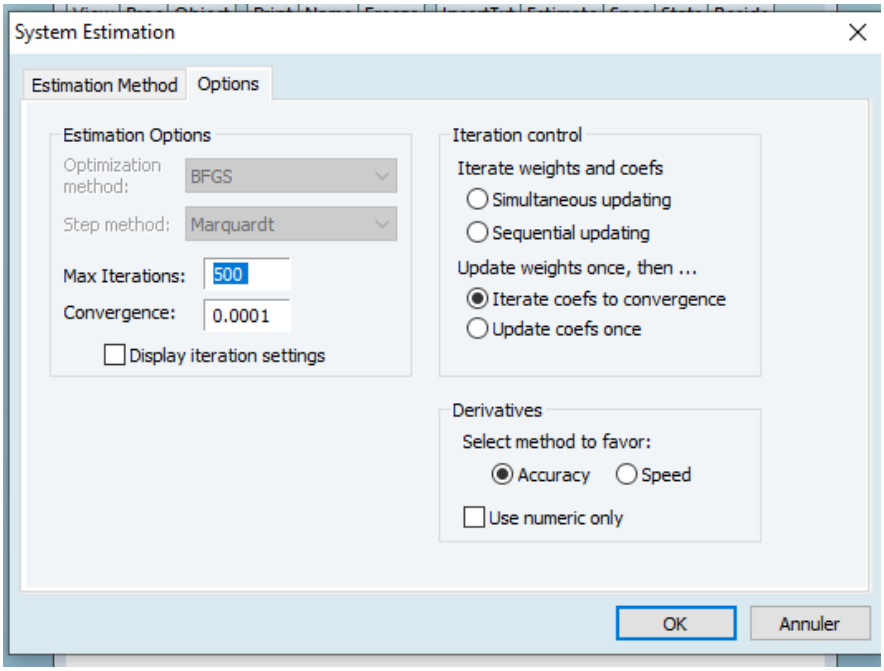
View
Proc
Object
Print
Name
Freeze
InsertTxt
Estimate
Spec
Stats
Resids
INC = C(1) + C(2)*U6 + C(3)*INCPOP + C(4)*COHAB
OPP = C(5) + C(6)*DU + C(7)*OPPOLL + C(8)*COHAB + C(9)*CONSOPP
CHAL = C(10) + C(11)*INCPOP + C(12)*CHALPOLL + C(13)*MODEM + C(14)
*DUMHOLL
FAR = C(15) + C(16)*U6 + C(17)*COHABRP + C(18)*DUMMLP + C(19)*DUMTIXIER
+ C(20)*DUMLP81
DR = C(21) + C(22)*DRPOLL + C(23)*DUMCONS


System Estimation
Estimation Method
Options
Estimation method
Seemingly Unrelated Regression
Estimation settings
Add lagged regressors to instruments for linear equations with AR terms
Identity weighting matrix in estimation (2SLS coefs & GMM robust std.errors)
Time series HAC specification
Prewhitening by VAR(1)
Kernel options
Bartlett
Quadratic
Bandwidth selection
Fixed:
nw
Number or NW for Newey-West
Andrews
Variable - Newey-West
Sample
1965 2017
OK
Annuler


System Estimation
Estimation Method
Options
Estimation Options
Optimization method:
BFGS
Step method:
Marquardt
Max Iterations:
500
Convergence:
0.0001
Display iteration settings
Iteration control
Iterate weights and coefs
Simultaneous updating
Sequential updating
Update weights once, then ...
Iterate coefs to convergence
Update coefs once
Derivatives
Select method to favor:
Accuracy
Speed
Use numeric only
OK
Annuler

3°) SUR estimates

System: UNTITLED
Estimation Method: Seemingly Unrelated Regression
Date: 01/26/22 Time: 16:47
Sample: 1965 2017
Included observations: 10
Total system (balanced) observations 50
Linear estimation after one-step weighting matrix

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	18.82593	3.358153	5.606038	0.0000
C(2)	-1.521242	0.374337	-4.063836	0.0004
C(3)	0.499086	0.053293	9.364938	0.0000
C(4)	-8.495959	2.212269	-3.840382	0.0007
C(5)	17.29701	1.785858	9.685545	0.0000
C(6)	7.260213	1.501441	4.835498	0.0000
C(7)	0.641176	0.047177	13.59088	0.0000
C(8)	2.750018	0.959549	2.865949	0.0080
C(9)	-8.221482	1.310214	-6.274916	0.0000
C(10)	24.46250	1.810216	13.51358	0.0000
C(11)	-0.196363	0.027035	-7.263319	0.0000
C(12)	0.239226	0.056346	4.245684	0.0002
C(13)	-11.74515	1.401905	-8.377996	0.0000
C(14)	16.10872	1.838431	8.762215	0.0000
C(15)	-4.247456	0.628634	-6.756641	0.0000
C(16)	1.952513	0.085722	22.77725	0.0000
C(17)	8.739104	0.457743	19.09172	0.0000
C(18)	5.476591	0.534648	10.24336	0.0000
C(19)	6.688569	0.724488	9.232135	0.0000
C(20)	-6.952030	0.434156	-16.01276	0.0000
C(21)	4.028200	0.629570	6.398335	0.0000
C(22)	0.610721	0.095908	6.367763	0.0000
C(23)	-3.681173	0.663333	-5.549508	0.0000

Determinant residual covariance	0.073140

Equation: INC = C(1) + C(2)*U6 + C(3)*INCPOP + C(4)*COHAB
Observations: 10

R-squared	0.909212	Mean dependent var	25.96200
Adjusted R-squared	0.863818	S.D. dependent var	12.12604
S.E. of regression	4.474850	Sum squared resid	120.1457
Durbin-Watson stat	1.913528		

Equation: OPP = C(5) + C(6)*DU + C(7)*OPPOLL + C(8)*COHAB + C(9)*CONSOPP
Observations: 10

R-squared	0.963740	Mean dependent var	38.80500
Adjusted R-squared	0.934732	S.D. dependent var	9.407754
S.E. of regression	2.403449	Sum squared resid	28.88283
Durbin-Watson stat	1.339403		

Equation: CHAL = C(10) + C(11)*INCPOP + C(12)*CHALPOLL + C(13)*MODEM + C(14)*DUMHOLL
Observations: 10

R-squared	0.971910	Mean dependent var	22.19300
Adjusted R-squared	0.949439	S.D. dependent var	10.09452
S.E. of regression	2.269837	Sum squared resid	25.76079
Durbin-Watson stat	1.974479		

Equation: FAR = C(15) + C(16)*U6 + C(17)*COHABRP + C(18)*DUMMLP + C(19)*DUMTIXIER + C(20)*DUMLP81
Observations: 10

R-squared	0.990527	Mean dependent var	10.41800
Adjusted R-squared	0.978686	S.D. dependent var	8.340404
S.E. of regression	1.217636	Sum squared resid	5.930551
Durbin-Watson stat	2.055793		

Equation: DR = C(21) + C(22)*DRPOLL + C(23)*DUMCONS
Observations: 10

R-squared	0.858034	Mean dependent var	2.447000
Adjusted R-squared	0.817472	S.D. dependent var	2.449712
S.E. of regression	1.046597	Sum squared resid	7.667561
Durbin-Watson stat	1.952560		