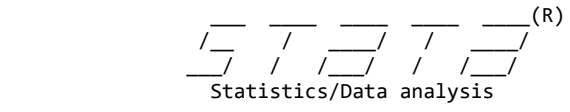

---

      name: **<unnamed>**
       log: **C:\Users\40018815\OneDrive - Edinburgh Napier University\Surplus Value paper\SER\EXCEL\SER A**
> LL.smcl
  log type: **smcl**
 opened on: **14 Jun 2025, 22:18:55**

```
 1 . import excel "C:\Users\40018815\OneDrive - Edinburgh Napier University\Surplus Value paper\CJE\R_R\FULL
   >  MATRIX.xlsx", sheet("Sheet1") firstrow
no; data in memory would be lost
r(4);

 2 . import excel "C:\Users\40018815\OneDrive - Edinburgh Napier University\Surplus Value paper\CJE\R_R\FULL
   >  MATRIX.xlsx", sheet("Sheet1") firstrow
no; data in memory would be lost
r(4);

 3 . clear

 4 . import excel "C:\Users\40018815\OneDrive - Edinburgh Napier University\Surplus Value paper\SER\EXCEL\FU
   > LL MATRIX.xlsx", sheet("Sheet1") firstrow
(197 vars, 29 obs)

 5 . ALL YEARS
command ALL is unrecognized
r(199);

 6 . ALL YEARS
command ALL is unrecognized
r(199);

 7 . ALL YEARS
command ALL is unrecognized
r(199);

 8 . ALL YEARS
command ALL is unrecognized
r(199);

 9 . ALL YEARS
command ALL is unrecognized
r(199);

10 . ALL YEARS
command ALL is unrecognized
r(199);

11 . ivregress 2sls S_allS_all1992  SLT_allSLT_all1992 melt_allmelt_all1992 GFCG_index LupLp_prv_empl LupLp_
   > mix WupWp ( w_hrl_allw_hr_alll1992 = SLT_allSLT_all1992 melt_allmelt_all1992 CPI1992 GFCG_index LupLp_p
   > rv_empl LupLp_mix LuppubLp WupWp)

Instrumental-variables 2SLS regression           Number of obs   =         28
                                                 Wald chi2(7)    =    6466.22
                                                 Prob > chi2     =     0.0000
                                                 R-squared       =     0.9960
                                                 Root MSE        =     .25273

------------------------------------------------------------------------------
       S_allS_all1992 | Coefficient  Std. err.      z    P>|z|     [95% conf. interval]
----------------------+-------------------------------------------------------
w_hrl_allw_hr_alll1992 |  -1.656319   .0454989   -36.40   0.000    -1.745495   -1.567143
    SLT_allSLT_all1992 |  -.0941893   .0478332    -1.97   0.049    -.1879407   -.0004379
  melt_allmelt_all1992 |   1.618873   .0381536    42.43   0.000     1.544093    1.693652
            GFCG_index |   .0137463   .0072378     1.90   0.058    -.0004395    .0279321
       LupLp_prv_empl |   .0136887   .0160139     0.85   0.393    -.0176979    .0450754
           LupLp_mix |  -.0282468   .0130023    -2.17   0.030    -.0537308   -.0027629
               WupWp |   -.022583   .0154448    -1.46   0.144    -.0528543    .0076882
               _cons |   114.9759   5.407778    21.26   0.000     104.3768    125.5749
------------------------------------------------------------------------------
Endogenous: w_hrl_allw_hr_alll1992
Exogenous:  SLT_allSLT_all1992 melt_allmelt_all1992 GFCG_index LupLp_prv_empl LupLp_mix
            WupWp CPI1992 LuppubLp
```

```
12 .  estat endog

     Tests of endogeneity
     H0: Variables are exogenous

     Durbin (score) chi2(1)          =  .264764  (p = 0.6069)
     Wu-Hausman F(1,19)              =  .181376  (p = 0.6750)

13 . tset YEAR

   Time variable: YEAR, 1992 to 2020
           Delta: 1 unit

14 . prais S_allS_all1992 w_hrl_allw_hr_alll1992 SLT_allSLT_all1992 melt_allmelt_all1992 GFCG_index LupLp_pr
   > v_empl LupLp_mix WupWp

   Number of gaps in sample = 1
   note: computations for rho restarted at each gap.

   Iteration 0:  rho = 0.0000
   Iteration 1:  rho = 0.6765
   Iteration 2:  rho = 0.7880
   Iteration 3:  rho = 0.8166
   Iteration 4:  rho = 0.8267
   Iteration 5:  rho = 0.8306
   Iteration 6:  rho = 0.8321
   Iteration 7:  rho = 0.8328
   Iteration 8:  rho = 0.8330
   Iteration 9:  rho = 0.8331
   Iteration 10: rho = 0.8332
   Iteration 11: rho = 0.8332
   Iteration 12: rho = 0.8332
   Iteration 13: rho = 0.8332
   Iteration 14: rho = 0.8332
   Iteration 15: rho = 0.8332

   Prais-Winsten AR(1) regression with iterated estimates

          Source |       SS           df       MS      Number of obs   =        28
   --------------+----------------------------------   F(7, 20)        =  11901.42
           Model |  3097.28989         7  442.469984   Prob > F        =    0.0000
        Residual |  .743558018        20  .037177901   R-squared       =    0.9998
   --------------+----------------------------------   Adj R-squared   =    0.9997
           Total |  3098.03344        27  114.741979   Root MSE        =    .19282

   ------------------------------------------------------------------------------
     S_allS_all1992 | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
   -----------------+------------------------------------------------------------
   w_hrl_allw_hr_alll1992 |  -1.606627   .0487511   -32.96   0.000    -1.70832   -1.504934
       SLT_allSLT_all1992 |  -.0293263   .0479816    -0.61   0.548   -.1294142    .0707616
     melt_allmelt_all1992 |     1.5885   .0420976    37.73   0.000    1.500686    1.676314
               GFCG_index |   .0116397   .0082725     1.41   0.175   -.0056164    .0288958
            LupLp_prv_empl |   .0074183   .0087426     0.85   0.406   -.0108185    .0256551
                 LupLp_mix |  -.0218084   .0105014    -2.08   0.051   -.0437141    .0000972
                     WupWp |  -.0188443   .0105453    -1.79   0.089   -.0408414    .0031529
                     _cons |    106.564   5.577008    19.11   0.000    94.93054    118.1974
   -----------------+------------------------------------------------------------
                       rho |   .8332042
   ------------------------------------------------------------------------------

   Durbin-Watson statistic (original)    = 0.610307
   Durbin-Watson statistic (transformed) = 1.589138
```

```
15 . reg d.S_allS_all1992 d.w_hrl_allw_hr_alll1992 d.SLT_allSLT_all1992 d.melt_allmelt_all1992 d. GFCG_index
>  d.LupLp_prv_empl d.LupLp_mix d.WupWp
```

Source	SS	df	MS	Number of obs	=	26
				F(7, 18)	=	633.36
Model	187.551056	7	26.793008	Prob > F	=	0.0000
Residual	.761455248	18	.042303069	R-squared	=	0.9960
				Adj R-squared	=	0.9944
Total	188.312511	25	7.53250046	Root MSE	=	.20568

D.S_allS_all1992	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
w_hrl_allw_hr_alll1992						
D1.	-1.582229	.0534755	-29.59	0.000	-1.694577	-1.469881
SLT_allSLT_all1992						
D1.	.0108955	.0631102	0.17	0.865	-.121694	.143485
melt_allmelt_all1992						
D1.	1.567049	.0493581	31.75	0.000	1.463352	1.670747
GFCG_index						
D1.	.0088653	.009008	0.98	0.338	-.0100598	.0277904
LupLp_prv_empl						
D1.	.0084039	.0087138	0.96	0.348	-.009903	.0267108
LupLp_mix						
D1.	-.0214153	.0108212	-1.98	0.063	-.0441498	.0013191
WupWp						
D1.	-.0198233	.0111535	-1.78	0.092	-.043256	.0036093
_cons	.0215883	.053627	0.40	0.692	-.0910779	.1342544

```
16 . vif
```

Variable	VIF	1/VIF
melt_al~1992		
D1.	16.31	0.061315
w_hrl_a~1992		
D1.	14.43	0.069306
SLT_all~1992		
D1.	4.97	0.201384
GFCG_index		
D1.	2.16	0.462160
LupLp_prv_~l		
D1.	2.00	0.500480
WupWp		
D1.	1.99	0.503168
LupLp_mix		
D1.	1.29	0.776414
Mean VIF	6.16	

```
17 . hettest

Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variable: Fitted values of D.S_allS_all1992

H0: Constant variance

    chi2(1) =   0.89
Prob > chi2 = 0.3460
```

```
18 . hettest, rhs

   Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
   Assumption: Normal error terms
   Variables: All independent variables

   H0: Constant variance

       chi2(7) =   2.11
   Prob > chi2 = 0.9537

19 . ovtest

   Ramsey RESET test for omitted variables
   Omitted: Powers of fitted values of D.S_allS_all1992

   H0: Model has no omitted variables

   F(3, 15) =   2.25
   Prob > F = 0.1249

20 . ivregress 2sls S_prodS_prod1992 SLT_prodSLT_prod1992 melt_prodmelt_prod1992  GFCG_index LupLp_prv_empl
   > LupLp_mix WupWp ( w_hrl_prodw_hr_prod1992 = SLT_prodSLT_prod1992 melt_prodmelt_prod1992 CPI1992 GFCG_in
   > dex LupLp_prv_empl LupLp_mix WupWp)

   Instrumental-variables 2SLS regression           Number of obs   =         28
                                                    Wald chi2(7)    =     367.50
                                                    Prob > chi2     =     0.0000
                                                    R-squared       =     0.9344
                                                    Root MSE        =     1.6144

------------------------------------------------------------------------------
       S_prodS_prod1992 | Coefficient  Std. err.      z    P>|z|     [95% conf. interval]
------------------------+-----------------------------------------------------
w_hrl_prodw_hr_prod1992 |  -1.467643   .4978286    -2.95   0.003    -2.443369   -.4919166
   SLT_prodSLT_prod1992 |  -.2265433   .5391627    -0.42   0.674    -1.283283    .8301962
 melt_prodmelt_prod1992 |   1.305981   .3813493     3.42   0.001     .5585506    2.053412
             GFCG_index |   .1122077   .0756997     1.48   0.138    -.0361611    .2605764
         LupLp_prv_empl |   .2410492   .1709762     1.41   0.159     -.094058    .5761565
              LupLp_mix |  -.0851736   .0659415    -1.29   0.196    -.2144166    .0440694
                  WupWp |  -.3751523   .3362518    -1.12   0.265    -1.034194    .2838891
                  _cons |   152.6832   81.33108     1.88   0.060    -6.722733    312.0892
------------------------------------------------------------------------------
   Endogenous: w_hrl_prodw_hr_prod1992
   Exogenous:  SLT_prodSLT_prod1992 melt_prodmelt_prod1992 GFCG_index LupLp_prv_empl LupLp_mix
               WupWp CPI1992

21 .  estat endog

     Tests of endogeneity
     H0: Variables are exogenous

     Durbin (score) chi2(1)          =  1.93457  (p = 0.1643)
     Wu-Hausman F(1,19)              =  1.41017  (p = 0.2497)

22 . prais S_prodS_prod1992 w_hrl_prodw_hr_prod1992 SLT_prodSLT_prod1992 melt_prodmelt_prod1992  GFCG_index
   > LupLp_prv_empl LupLp_mix WupWp

   Number of gaps in sample = 1
   note: computations for rho restarted at each gap.

   Iteration 0:  rho = 0.0000
   Iteration 1:  rho = 0.1050
   Iteration 2:  rho = 0.1708
   Iteration 3:  rho = 0.2147
   Iteration 4:  rho = 0.2452
   Iteration 5:  rho = 0.2666
   Iteration 6:  rho = 0.2819
   Iteration 7:  rho = 0.2928
   Iteration 8:  rho = 0.3007
   Iteration 9:  rho = 0.3063
   Iteration 10: rho = 0.3103
   Iteration 11: rho = 0.3133
   Iteration 12: rho = 0.3154
```

```
Iteration 13: rho = 0.3169
Iteration 14: rho = 0.3179
Iteration 15: rho = 0.3187
Iteration 16: rho = 0.3193
Iteration 17: rho = 0.3197
Iteration 18: rho = 0.3200
Iteration 19: rho = 0.3202
Iteration 20: rho = 0.3203
Iteration 21: rho = 0.3204
Iteration 22: rho = 0.3205
Iteration 23: rho = 0.3206
Iteration 24: rho = 0.3206
Iteration 25: rho = 0.3206
Iteration 26: rho = 0.3206
Iteration 27: rho = 0.3207
Iteration 28: rho = 0.3207
Iteration 29: rho = 0.3207
Iteration 30: rho = 0.3207
Iteration 31: rho = 0.3207
Iteration 32: rho = 0.3207
Iteration 33: rho = 0.3207
Iteration 34: rho = 0.3207
Iteration 35: rho = 0.3207
Iteration 36: rho = 0.3207

Prais-Winsten AR(1) regression with iterated estimates
```

Source	SS	df	MS		
				Number of obs	= 28
				F(7, 20)	= 129.16
Model	1694.09149	7	242.01307	Prob > F	= 0.0000
Residual	37.4737588	20	1.87368794	R-squared	= 0.9784
				Adj R-squared	= 0.9708
Total	1731.56525	27	64.1320463	Root MSE	= 1.3688

S_prodS_prod1992	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
w_hrl_prodw_hr_prod1992	-1.015893	.1218247	-8.34	0.000	-1.270015	-.7617709
SLT_prodSLT_prod1992	.2474772	.2097421	1.18	0.252	-.1900371	.6849915
melt_prodmelt_prod1992	.9751387	.1097329	8.89	0.000	.7462399	1.204037
GFCG_index	.0332502	.0404934	0.82	0.421	-.0512176	.1177179
LupLp_prv_empl	.07386	.0926621	0.80	0.435	-.1194298	.2671497
LupLp_mix	-.0832134	.0607117	-1.37	0.186	-.2098558	.0434289
WupWp	-.03561	.1082428	-0.33	0.746	-.2614004	.1901805
_cons	80.97215	25.96621	3.12	0.005	26.80759	135.1367
rho	.3207004					

```
Durbin-Watson statistic (original)    = 1.264759
Durbin-Watson statistic (transformed) = 1.501439

23 . reg d.S_prodS_prod1992 d.w_hrl_prodw_hr_prod1992 d.SLT_prodSLT_prod1992 d.melt_prodmelt_prod1992  d.GFC
> G_index d.LupLp_prv_empl d.LupLp_mix d.WupWp
```

Source	SS	df	MS		
				Number of obs	= 26
				F(7, 18)	= 163.54
Model	1103.19567	7	157.599381	Prob > F	= 0.0000
Residual	17.3460907	18	.963671705	R-squared	= 0.9845
				Adj R-squared	= 0.9785
Total	1120.54176	25	44.8216703	Root MSE	= .98167

D.S_prodS_prod1992	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
w_hrl_prodw_hr_prod1992 D1.	-.8880923	.0985229	-9.01	0.000	-1.095081	-.6811033
SLT_prodSLT_prod1992 D1.	.8654397	.2513664	3.44	0.003	.3373386	1.393541
melt_prodmelt_prod1992 D1.	.8374042	.0942269	8.89	0.000	.639441	1.035368
GFCG_index						

D1.	**-.0748142**	**.0437112**	**-1.71**	**0.104**	**-.166648**	**.0170195**
LupLp_prv_empl						
D1.	**.0316651**	**.0694126**	**0.46**	**0.654**	**-.1141655**	**.1774956**
LupLp_mix						
D1.	**.0299004**	**.0480764**	**0.62**	**0.542**	**-.0711044**	**.1309052**
WupWp						
D1.	**-.0462908**	**.070844**	**-0.65**	**0.522**	**-.1951285**	**.1025468**
_cons	**.6581934**	**.2248837**	**2.93**	**0.009**	**.1857303**	**1.130657**

24 . vif

Variable	VIF	1/VIF
w_hrl_p~1992		
D1.	**8.48**	**0.117907**
SLT_pro~1992		
D1.	**6.74**	**0.148384**
LupLp_prv_~l		
D1.	**5.57**	**0.179671**
melt_pr~1992		
D1.	**4.51**	**0.221593**
WupWp		
D1.	**3.52**	**0.284111**
GFCG_index		
D1.	**2.24**	**0.447118**
LupLp_mix		
D1.	**1.12**	**0.896058**
Mean VIF	**4.60**	

25 . hettest

Breusch–Pagan/Cook–Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variable: Fitted values of **D.S_prodS_prod1992**

H0: Constant variance

chi2(**1**) = **0.75**
Prob > chi2 = **0.3861**

26 . hettest, rhs

Breusch–Pagan/Cook–Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variables: All independent variables

H0: Constant variance

chi2(**7**) = **7.79**
Prob > chi2 = **0.3515**

27 . ovtest

Ramsey RESET test for omitted variables
Omitted: Powers of fitted values of **D.S_prodS_prod1992**

H0: Model has no omitted variables

F(**3, 15**) = **0.58**
Prob > F = **0.6400**

```
28 . NO CAPITAL
   command NO is unrecognized
   r(199);

29 . NO CAPITAL
   command NO is unrecognized
   r(199);

30 . NO CAPITAL
   command NO is unrecognized
   r(199);

31 . NO CAPITAL
   command NO is unrecognized
   r(199);

32 . NO CAPITAL
   command NO is unrecognized
   r(199);

33 . ivregress 2sls S_allS_all1992  SLT_allSLT_all1992 melt_allmelt_all1992 LupLp_prv_empl LupLp_mix WupWp (
   >  w_hrl_allw_hr_alll1992 = SLT_allSLT_all1992 melt_allmelt_all1992 CPI1992 GFCG_index LupLp_prv_empl Lup
   > Lp_mix LuppubLp WupWp)

   Instrumental-variables 2SLS regression           Number of obs   =         28
                                                    Wald chi2(6)    =    5606.18
                                                    Prob > chi2     =     0.0000
                                                    R-squared       =     0.9954
                                                    Root MSE        =     .27135

------------------------------------------------------------------------------
       S_allS_all1992 | Coefficient  Std. err.      z    P>|z|     [95% conf. interval]
----------------------+-------------------------------------------------------
w_hrl_allw_hr_alll1992 |    -1.6252   .045573   -35.66   0.000    -1.714521   -1.535878
    SLT_allSLT_all1992 |   -.0946894   .0513563    -1.84   0.065    -.1953459     .005967
  melt_allmelt_all1992 |    1.602686   .0399292    40.14   0.000     1.524426    1.680946
       LupLp_prv_empl |    .0027695   .0160473     0.17   0.863    -.0286827    .0342216
            LupLp_mix |   -.0249564   .0138357    -1.80   0.071    -.0520738     .002161
                WupWp |   -.0136626   .0157972    -0.86   0.387    -.0446246    .0172994
                _cons |    114.6335   5.802937    19.75   0.000       103.26     126.007
------------------------------------------------------------------------------
   Endogenous: w_hrl_allw_hr_alll1992
   Exogenous:  SLT_allSLT_all1992 melt_allmelt_all1992 LupLp_prv_empl LupLp_mix WupWp CPI1992
               GFCG_index LuppubLp

34 .  estat endog

     Tests of endogeneity
     H0: Variables are exogenous

     Durbin (score) chi2(1)          =  .682955  (p = 0.4086)
     Wu-Hausman F(1,20)              =  .500021  (p = 0.4876)

35 . prais S_allS_all1992 w_hrl_allw_hr_alll1992 SLT_allSLT_all1992 melt_allmelt_all1992 LupLp_prv_empl LupL
   > p_mix WupWp

   Number of gaps in sample = 1
   note: computations for rho restarted at each gap.

   Iteration 0:  rho = 0.0000
   Iteration 1:  rho = 0.6482
   Iteration 2:  rho = 0.8218
   Iteration 3:  rho = 0.8788
   Iteration 4:  rho = 0.8993
   Iteration 5:  rho = 0.9069
   Iteration 6:  rho = 0.9098
   Iteration 7:  rho = 0.9108
   Iteration 8:  rho = 0.9113
   Iteration 9:  rho = 0.9114
   Iteration 10: rho = 0.9115
   Iteration 11: rho = 0.9115
   Iteration 12: rho = 0.9115
   Iteration 13: rho = 0.9115
   Iteration 14: rho = 0.9115
```

Iteration 15: rho = **0.9115**

Prais-Winsten AR(1) regression with iterated estimates

Source	SS	df	MS		
				Number of obs	= 28
				F(6, 21)	= 9681.64
Model	2211.82216	6	368.637027	Prob > F	= 0.0000
Residual	.799593847	21	.038075897	R-squared	= 0.9996
				Adj R-squared	= 0.9995
Total	2212.62176	27	81.9489539	Root MSE	= .19513

S_allS_all1992	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
w_hrl_allw_hr_all1992	-1.578774	.0479703	-32.91	0.000	-1.678534	-1.479014
SLT_allSLT_all1992	-.0002678	.0485851	-0.01	0.996	-.1013059	.1007704
melt_allmelt_all1992	1.581313	.0436468	36.23	0.000	1.490545	1.672082
LupLp_prv_empl	.0087622	.0085363	1.03	0.316	-.0089899	.0265143
LupLp_mix	-.0179767	.0100255	-1.79	0.087	-.0388257	.0028724
WupWp	-.0181571	.0104069	-1.74	0.096	-.0397995	.0034853
_cons	102.2647	5.338312	19.16	0.000	91.16306	113.3663
rho	.9115145					

Durbin-Watson statistic (original)   = **0.654106**
Durbin-Watson statistic (transformed) = **1.670272**

```
36 . reg d.S_allS_all1992 d.w_hrl_allw_hr_all1992 d.SLT_allSLT_all1992 d.melt_allmelt_all1992 d.LupLp_prv_e
> mpl d.LupLp_mix d.WupWp
```

Source	SS	df	MS		
				Number of obs	= 26
				F(6, 19)	= 739.98
Model	187.510083	6	31.2516805	Prob > F	= 0.0000
Residual	.802428677	19	.042233088	R-squared	= 0.9957
				Adj R-squared	= 0.9944
Total	188.312511	25	7.53250046	Root MSE	= .20551

D.S_allS_all1992	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
w_hrl_allw_hr_all1992 D1.	-1.5658	.0507611	-30.85	0.000	-1.672044	-1.459556
SLT_allSLT_all1992 D1.	.0303306	.0598913	0.51	0.618	-.0950233	.1556845
melt_allmelt_all1992 D1.	1.56411	.0492269	31.77	0.000	1.461077	1.667143
LupLp_prv_empl D1.	.0094558	.0086408	1.09	0.287	-.0086296	.0275412
LupLp_mix D1.	-.0180681	.0102643	-1.76	0.094	-.0395515	.0034153
WupWp D1.	-.0202652	.0111352	-1.82	0.085	-.0435715	.0030411
_cons	.0310566	.0527133	0.59	0.563	-.0792736	.1413869

```
37 . vif
```

Variable	VIF	1/VIF
melt_al~1992		
D1.	**16.25**	**0.061540**
w_hrl_a~1992		
D1.	**13.02**	**0.076790**
SLT_all~1992		
D1.	**4.48**	**0.223243**
WupWp		
D1.	**1.98**	**0.503985**
LupLp_prv_~l		
D1.	**1.97**	**0.508125**
LupLp_mix		
D1.	**1.16**	**0.861520**
Mean VIF	**6.48**	

38 . hettest

Breusch–Pagan/Cook–Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variable: Fitted values of **D.S_allS_all1992**

H0: Constant variance

chi2(**1**) = **0.96**
Prob > chi2 = **0.3284**

39 . hettest, rhs

Breusch–Pagan/Cook–Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variables: All independent variables

H0: Constant variance

chi2(**6**) = **2.03**
Prob > chi2 = **0.9173**

40 . ovtest

Ramsey RESET test for omitted variables
Omitted: Powers of fitted values of **D.S_allS_all1992**

H0: Model has no omitted variables

F(**3, 16**) = **2.37**
Prob > F = **0.1085**

41 . ivregress 2sls S_prodS_prod1992 SLT_prodSLT_prod1992 melt_prodmelt_prod1992 LupLp_prv_empl LupLp_mix Wu
> pWp (w_hrl_prodw_hr_prod1992 = SLT_prodSLT_prod1992 melt_prodmelt_prod1992 CPI1992 GFCG_index LupLp_pr
> v_empl LupLp_mix WupWp)

Instrumental-variables 2SLS regression

Number of obs	**28**
Wald chi2(**6**)	**603.64**
Prob > chi2	**0.0000**
R-squared	**0.9603**
Root MSE	**1.2559**

S_prodS_prod1992	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
w_hrl_prodw_hr_prod1992	**-.8127189**	**.1784376**	**-4.55**	**0.000**	**-1.16245**	**-.4629875**
SLT_prodSLT_prod1992	**.4280709**	**.2406062**	**1.78**	**0.075**	**-.0435086**	**.8996504**
melt_prodmelt_prod1992	**.8302313**	**.1602083**	**5.18**	**0.000**	**.5162289**	**1.144234**
LupLp_prv_empl	**.048699**	**.0866034**	**0.56**	**0.574**	**-.1210406**	**.2184385**
LupLp_mix	**-.0772709**	**.0511299**	**-1.51**	**0.131**	**-.1774837**	**.0229419**
WupWp	**.0656181**	**.1221167**	**0.54**	**0.591**	**-.1737262**	**.3049624**
_cons	**51.83696**	**34.66806**	**1.50**	**0.135**	**-16.1112**	**119.7851**

Endogenous: **w_hrl_prodw_hr_prod1992**
Exogenous: **SLT_prodSLT_prod1992 melt_prodmelt_prod1992 LupLp_prv_empl LupLp_mix WupWp CPI1992 GFCG_index**

```
42 .  estat endog

     Tests of endogeneity
     H0: Variables are exogenous

     Durbin (score) chi2(1)          =  .403249  (p = 0.5254)
     Wu-Hausman F(1,20)              =  .292244  (p = 0.5948)

43 . prais S_prodS_prod1992 w_hrl_prodw_hr_prod1992 SLT_prodSLT_prod1992 melt_prodmelt_prod1992 LupLp_prv_em
   > pl LupLp_mix WupWp

   Number of gaps in sample = 1
   note: computations for rho restarted at each gap.

   Iteration 0:  rho = 0.0000
   Iteration 1:  rho = 0.2499
   Iteration 2:  rho = 0.3872
   Iteration 3:  rho = 0.4605
   Iteration 4:  rho = 0.4956
   Iteration 5:  rho = 0.5109
   Iteration 6:  rho = 0.5172
   Iteration 7:  rho = 0.5196
   Iteration 8:  rho = 0.5206
   Iteration 9:  rho = 0.5210
   Iteration 10: rho = 0.5212
   Iteration 11: rho = 0.5212
   Iteration 12: rho = 0.5212
   Iteration 13: rho = 0.5213
   Iteration 14: rho = 0.5213
   Iteration 15: rho = 0.5213
   Iteration 16: rho = 0.5213

   Prais-Winsten AR(1) regression with iterated estimates

         Source |       SS           df       MS      Number of obs   =        28
   -------------+----------------------------------   F(6, 21)        =    282.87
          Model |  3010.80323         6  501.800539   Prob > F        =    0.0000
       Residual |  37.2535587        21  1.77397899   R-squared       =    0.9878
   -------------+----------------------------------   Adj R-squared   =    0.9843
          Total |  3048.05679        27  112.890992   Root MSE        =    1.3319

   ------------------------------------------------------------------------------
     S_prodS_prod1992 | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
   -------------------+----------------------------------------------------------------
   w_hrl_prodw_hr_prod1992 |   -1.02243   .1147453    -8.91   0.000    -1.261056   -.7838043
      SLT_prodSLT_prod1992 |   .2219457   .2298179     0.97   0.345    -.2559868    .6998782
    melt_prodmelt_prod1992 |   1.005066   .1076876     9.33   0.000     .7811176    1.229015
            LupLp_prv_empl |   .0363436   .0762613     0.48   0.639    -.1222505    .1949377
                 LupLp_mix |  -.0883237   .0615666    -1.43   0.166    -.2163584     .039711
                     WupWp |   .0000844   .0987262     0.00   0.999     -.205228    .2053967
                     _cons |   84.4914   27.70835     3.05   0.006     26.86873    142.1141
   -------------------+----------------------------------------------------------------
                       rho |   .521262
   ------------------------------------------------------------------------------

   Durbin-Watson statistic (original)    = 1.163171
   Durbin-Watson statistic (transformed) = 1.678838

44 . reg d.S_prodS_prod1992 d.w_hrl_prodw_hr_prod1992 d.SLT_prodSLT_prod1992 d.melt_prodmelt_prod1992 d.LupL
   > p_prv_empl d.LupLp_mix d.WupWp

         Source |       SS           df       MS      Number of obs   =        26
   -------------+----------------------------------   F(6, 19)        =    172.76
          Model |  1100.37266         6  183.395443   Prob > F        =    0.0000
       Residual |  20.1691011        19  1.06153163   R-squared       =    0.9820
   -------------+----------------------------------   Adj R-squared   =    0.9763
          Total |  1120.54176        25  44.8216703   Root MSE        =    1.0303
```

D.S_prodS_prod1992	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
w_hrl_prodw_hr_prod1992 D1.	**-.9715986**	**.0898349**	**-10.82**	**0.000**	**-1.159625**	**-.783572**
SLT_prodSLT_prod1992 D1.	**.6650578**	**.2334584**	**2.85**	**0.010**	**.1764239**	**1.153692**
melt_prodmelt_prod1992 D1.	**.7947966**	**.0953817**	**8.33**	**0.000**	**.5951603**	**.9944329**
LupLp_prv_empl D1.	**.1104749**	**.054515**	**2.03**	**0.057**	**-.0036263**	**.2245761**
LupLp_mix D1.	**.0195863**	**.0500605**	**0.39**	**0.700**	**-.0851916**	**.1243641**
WupWp D1.	**-.0745106**	**.0723124**	**-1.03**	**0.316**	**-.225862**	**.0768409**
_cons	**.5747636**	**.2304147**	**2.49**	**0.022**	**.0925001**	**1.057027**

45 . vif

Variable	VIF	1/VIF
w_hrl_p~1992 D1.	**6.40**	**0.156217**
SLT_pro~1992 D1.	**5.28**	**0.189490**
melt_pr~1992 D1.	**4.20**	**0.238220**
WupWp D1.	**3.33**	**0.300381**
LupLp_prv_~l D1.	**3.12**	**0.320868**
LupLp_mix D1.	**1.10**	**0.910361**
Mean VIF	**3.90**	

46 . hettest

Breusch–Pagan/Cook–Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variable: Fitted values of **D.S_prodS_prod1992**

H0: Constant variance

chi2(**1**) = **0.32**
Prob > chi2 = **0.5719**

47 . hettest, rhs

Breusch–Pagan/Cook–Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variables: All independent variables

H0: Constant variance

chi2(**6**) = **3.91**
Prob > chi2 = **0.6883**

```
48 . ovtest

   Ramsey RESET test for omitted variables
   Omitted: Powers of fitted values of D.S_prodS_prod1992

   H0: Model has no omitted variables

   F(3, 16) =   0.44
   Prob > F = 0.7260

49 . 1992-2007 w CAPITAL
   1992 is not a valid command name
   r(199);

50 . 1992-2007 w CAPITAL
   1992 is not a valid command name
   r(199);

51 . 1992-2007 w CAPITAL
   1992 is not a valid command name
   r(199);

52 . 1992-2007 w CAPITAL
   1992 is not a valid command name
   r(199);

53 . 1992-2007 w CAPITAL
   1992 is not a valid command name
   r(199);

54 . drop in 17/29
   (13 observations deleted)

55 . ivregress 2sls S_allS_all1992  SLT_allSLT_all1992 melt_allmelt_all1992 GFCG_index LupLp_prv_empl LupLp_
   > mix WupWp ( w_hrl_allw_hr_alll1992 = SLT_allSLT_all1992 melt_allmelt_all1992 CPI1992 GFCG_index LupLp_p
   > rv_empl LupLp_mix LuppubLp WupWp)

   Instrumental-variables 2SLS regression          Number of obs   =         15
                                                   Wald chi2(7)    =   22174.88
                                                   Prob > chi2     =     0.0000
                                                   R-squared       =     0.9993
                                                   Root MSE        =     .08291

------------------------------------------------------------------------------
       S_allS_all1992 | Coefficient  Std. err.      z    P>|z|     [95% conf. interval]
----------------------+-------------------------------------------------------
w_hrl_allw_hr_alll1992 |  -1.578061   .1900599    -8.30   0.000    -1.950571    -1.20555
    SLT_allSLT_all1992 |   .2743134   .1790605     1.53   0.126    -.0766388    .6252656
  melt_allmelt_all1992 |   1.678316   .1294338    12.97   0.000     1.42463    1.932001
           GFCG_index |  -.0314752   .0387901    -0.81   0.417    -.1075023    .0445519
        LupLp_prv_empl |   .0700325    .026334     2.66   0.008     .0184187    .1216462
             LupLp_mix |  -.0076699   .0079341    -0.97   0.334    -.0232204    .0078807
                 WupWp |  -.0729271   .0264441    -2.76   0.006    -.1247566   -.0210976
                 _cons |   67.25255   20.29986     3.31   0.001     27.46556    107.0395
------------------------------------------------------------------------------
   Endogenous: w_hrl_allw_hr_alll1992
   Exogenous:  SLT_allSLT_all1992 melt_allmelt_all1992 GFCG_index LupLp_prv_empl LupLp_mix
               WupWp CPI1992 LuppubLp

56 .  estat endog

     Tests of endogeneity
     H0: Variables are exogenous

     Durbin (score) chi2(1)          =  4.48421  (p = 0.0342)
     Wu-Hausman F(1,6)               =  2.55856  (p = 0.1608)
```

```
57 . prais S_allS_all1992 w_hrl_allw_hr_alll1992 SLT_allSLT_all1992 melt_allmelt_all1992 GFCG_index LupLp_pr
> v_empl LupLp_mix WupWp

Number of gaps in sample = 1
note: computations for rho restarted at each gap.

Iteration 0:  rho = 0.0000
Iteration 1:  rho = -0.3664
Iteration 2:  rho = -0.5369
Iteration 3:  rho = -0.5655
Iteration 4:  rho = -0.5691
Iteration 5:  rho = -0.5695
Iteration 6:  rho = -0.5696
Iteration 7:  rho = -0.5696
Iteration 8:  rho = -0.5696

Prais-Winsten AR(1) regression with iterated estimates

      Source |       SS           df       MS      Number of obs   =        15
-------------+----------------------------------   F(7, 7)         >  99999.00
       Model |  8345.31957         7  1192.18851   Prob > F        =    0.0000
    Residual |  .021190069         7  .003027153   R-squared       =    1.0000
-------------+----------------------------------   Adj R-squared   =    1.0000
       Total |  8345.34076        14  596.095768   Root MSE        =    .05502

------------------------------------------------------------------------------
S_allS_all1992 | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
---------------+--------------------------------------------------------------
w_hrl_allw_hr_alll1992 |  -1.779042   .0384946   -46.22   0.000    -1.870067   -1.688016
    SLT_allSLT_all1992 |   .0903506   .0376223     2.40   0.047      .001388    .1793132
  melt_allmelt_all1992 |   1.815159   .0278807    65.10   0.000     1.749232    1.881087
           GFCG_index |   .0094098   .0086506     1.09   0.313    -.0110457    .0298653
        LupLp_prv_empl |   .0511437    .010079     5.07   0.001     .0273107    .0749768
             LupLp_mix |   -.012832   .0045727    -2.81   0.026    -.0236448   -.0020192
                 WupWp |  -.0523773   .0083178    -6.30   0.000    -.0720458   -.0327089
                 _cons |   87.96883   4.518973    19.47   0.000     77.28316    98.6545
---------------+--------------------------------------------------------------
                   rho |  -.5695658
------------------------------------------------------------------------------

Durbin-Watson statistic (original)    = 2.667404
Durbin-Watson statistic (transformed) = 2.360717

58 . reg d.S_allS_all1992 d.w_hrl_allw_hr_alll1992 d.SLT_allSLT_all1992 d.melt_allmelt_all1992 d. GFCG_index
>  d.LupLp_prv_empl d.LupLp_mix d.WupWp

      Source |       SS           df       MS      Number of obs   =        13
-------------+----------------------------------   F(7, 5)         =    600.92
       Model |  22.113566         7  3.15908086   Prob > F        =    0.0000
    Residual |  .026285284         5  .005257057   R-squared       =    0.9988
-------------+----------------------------------   Adj R-squared   =    0.9972
       Total |  22.1398513        12  1.84498761   Root MSE        =    .07251

------------------------------------------------------------------------------
D.S_allS_all1992 | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
-----------------+------------------------------------------------------------
w_hrl_allw_hr_alll1992 |
                 D1. |  -1.768915   .0653896   -27.05   0.000    -1.937004   -1.600825
                     |
    SLT_allSLT_all1992 |
                 D1. |    .058768   .0607628     0.97   0.378    -.0974277    .2149637
                     |
  melt_allmelt_all1992 |
                 D1. |   1.824504   .0505244    36.11   0.000     1.694626    1.954381
                     |
           GFCG_index |
                 D1. |   .0115658   .0102175     1.13   0.309    -.0146991    .0378307
                     |
        LupLp_prv_empl |
                 D1. |   .0327816   .0098504     3.33   0.021     .0074604    .0581028
                     |
             LupLp_mix |
                 D1. |  -.0054337   .0053653    -1.01   0.358    -.0192257    .0083584
                     |
                 WupWp |
```

D1.	**-.0264753**	**.009008**	**-2.94**	**0.032**	**-.049631**	**-.0033196**
_cons	**-.0675836**	**.0600652**	**-1.13**	**0.312**	**-.2219861**	**.086819**

59 . vif

Variable	VIF	1/VIF
w_hrl_a~1992		
D1.	**28.71**	**0.034828**
melt_al~1992		
D1.	**18.36**	**0.054469**
SLT_all~1992		
D1.	**7.97**	**0.125514**
LupLp_prv_~l		
D1.	**4.66**	**0.214535**
WupWp		
D1.	**4.60**	**0.217486**
GFCG_index		
D1.	**2.13**	**0.469096**
LupLp_mix		
D1.	**2.11**	**0.474505**
Mean VIF	**9.79**	

60 . hettest

Breusch–Pagan/Cook–Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variable: Fitted values of **D.S_allS_all1992**

H0: Constant variance

chi2(**1**) = **0.01**
Prob > chi2 = **0.9401**

61 . hettest, rhs

Breusch–Pagan/Cook–Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variables: All independent variables

H0: Constant variance

chi2(**7**) = **5.54**
Prob > chi2 = **0.5947**

62 . ovtest

Ramsey RESET test for omitted variables
Omitted: Powers of fitted values of **D.S_allS_all1992**

H0: Model has no omitted variables

F(**3**, **2**) = **1.97**
Prob > F = **0.3538**

63 . ivregress 2sls S_prodS_prod1992 SLT_prodSLT_prod1992 melt_prodmelt_prod1992 GFCG_index LupLp_prv_empl
> LupLp_mix WupWp (w_hrl_prodw_hr_prod1992 = SLT_prodSLT_prod1992 melt_prodmelt_prod1992 CPI1992 GFCG_in
> dex LupLp_prv_empl LupLp_mix WupWp)

Instrumental-variables 2SLS regression

Number of obs = **15**
Wald chi2(**7**) = **2167.23**
Prob > chi2 = **0.0000**
R-squared = **0.9934**
Root MSE = **.48596**

S_prodS_prod1992	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
w_hrl_prodw_hr_prod1992	-1.461731	.4188636	-3.49	0.000	-2.282689	-.6407738
SLT_prodSLT_prod1992	-.8596926	1.198545	-0.72	0.473	-3.208799	1.489413
melt_prodmelt_prod1992	1.185849	.1238393	9.58	0.000	.943128	1.428569
GFCG_index	.1855156	.2987302	0.62	0.535	-.3999848	.7710161
LupLp_prv_empl	.1513749	.141784	1.07	0.286	-.1265167	.4292664
LupLp_mix	.045684	.0433001	1.06	0.291	-.0391826	.1305507
WupWp	.1053501	.1675229	0.63	0.529	-.2229888	.433689
_cons	165.3506	113.0374	1.46	0.144	-56.19868	386.8999

Endogenous: **w_hrl_prodw_hr_prod1992**
Exogenous: **SLT_prodSLT_prod1992 melt_prodmelt_prod1992 GFCG_index LupLp_prv_empl LupLp_mix WupWp CPI1992**

```
64 .  estat endog

  Tests of endogeneity
  H0: Variables are exogenous

  Durbin (score) chi2(1)          =  .974508  (p = 0.3236)
  Wu-Hausman F(1,6)               =  .416887  (p = 0.5424)

65 . prais S_prodS_prod1992 w_hrl_prodw_hr_prod1992 SLT_prodSLT_prod1992 melt_prodmelt_prod1992  GFCG_index
> LupLp_prv_empl LupLp_mix WupWp

Number of gaps in sample = 1
note: computations for rho restarted at each gap.

Iteration 0:  rho = 0.0000
Iteration 1:  rho = -0.2411
Iteration 2:  rho = -0.3933
Iteration 3:  rho = -0.4548
Iteration 4:  rho = -0.4754
Iteration 5:  rho = -0.4818
Iteration 6:  rho = -0.4839
Iteration 7:  rho = -0.4845
Iteration 8:  rho = -0.4847
Iteration 9:  rho = -0.4847
Iteration 10: rho = -0.4847
Iteration 11: rho = -0.4848
Iteration 12: rho = -0.4848
Iteration 13: rho = -0.4848

Prais-Winsten AR(1) regression with iterated estimates

      Source |       SS           df       MS      Number of obs   =        15
-------------+----------------------------------   F(7, 7)         =   5820.92
       Model |  10044.5472         7  1434.93531   Prob > F        =    0.0000
    Residual |  1.72559384         7  .246513406   R-squared       =    0.9998
-------------+----------------------------------   Adj R-squared   =    0.9997
       Total |  10046.2728        14  717.590912   Root MSE        =     .4965
```

S_prodS_prod1992	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
w_hrl_prodw_hr_prod1992	-1.173539	.1119382	-10.48	0.000	-1.438231	-.9088472
SLT_prodSLT_prod1992	.0051733	.4045848	0.01	0.990	-.9515177	.9618644
melt_prodmelt_prod1992	1.287353	.0840992	15.31	0.000	1.08849	1.486216
GFCG_index	-.0423417	.0924988	-0.46	0.661	-.2610665	.1763831
LupLp_prv_empl	.1076727	.1043524	1.03	0.336	-.1390815	.354427
LupLp_mix	.0251032	.0352862	0.71	0.500	-.0583355	.1085419
WupWp	-.0433417	.0767589	-0.56	0.590	-.2248478	.1381644
_cons	84.72872	35.6525	2.38	0.049	.423957	169.0335
rho	-.4847544					

Durbin-Watson statistic (original)   = **2.292349**
Durbin-Watson statistic (transformed) = **2.245541**

```
66 . reg d.S_prodS_prod1992 d.w_hrl_prodw_hr_prod1992 d.SLT_prodSLT_prod1992 d.melt_prodmelt_prod1992  d.GFC
> G_index d.LupLp_prv_empl d.LupLp_mix d.WupWp
```

Source	SS	df	MS	Number of obs	=	13
				F(7, 5)	=	405.04
Model	484.128096	7	69.1611566	Prob > F	=	0.0000
Residual	.853759324	5	.170751865	R-squared	=	0.9982
				Adj R-squared	=	0.9958
Total	484.981855	12	40.4151546	Root MSE	=	.41322

D.S_prodS_prod1992	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
w_hrl_prodw_hr_prod1992 D1.	-.5462698	.1523215	-3.59	0.016	-.9378247	-.1547149
SLT_prodSLT_prod1992 D1.	1.42033	.4091636	3.47	0.018	.368542	2.472119
melt_prodmelt_prod1992 D1.	1.401589	.1090517	12.85	0.000	1.121262	1.681915
GFCG_index D1.	-.1645544	.0699019	-2.35	0.065	-.3442429	.015134
LupLp_prv_empl D1.	-.2556862	.1112818	-2.30	0.070	-.5417451	.0303727
LupLp_mix D1.	-.0354821	.0383229	-0.93	0.397	-.1339943	.0630301
WupWp D1.	.125278	.0592204	2.12	0.088	-.0269529	.277509
_cons	-1.194465	.3920379	-3.05	0.029	-2.20223	-.1866995

```
67 . vif
```

Variable	VIF	1/VIF
SLT_pro~1992 D1.	54.68	0.018289
w_hrl_p~1992 D1.	28.35	0.035276
LupLp_prv_~l D1.	18.32	0.054598
WupWp D1.	6.12	0.163442
LupLp_mix D1.	3.31	0.302093
GFCG_index D1.	3.07	0.325533
melt_pr~1992 D1.	2.86	0.350142
Mean VIF	16.67	

```
68 . hettest

Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variable: Fitted values of D.S_prodS_prod1992

H0: Constant variance

    chi2(1) =   0.31
Prob > chi2 = 0.5749
```

```
69 . hettest, rhs

   Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
   Assumption: Normal error terms
   Variables: All independent variables

   H0: Constant variance

       chi2(7) =   8.37
   Prob > chi2 = 0.3010

70 . ovtest

   Ramsey RESET test for omitted variables
   Omitted: Powers of fitted values of D.S_prodS_prod1992

   H0: Model has no omitted variables

    F(3, 2) =   5.29
   Prob > F = 0.1630

71 . NO CAPITAL
   command NO is unrecognized
   r(199);

72 . NO CAPITAL
   command NO is unrecognized
   r(199);

73 . NO CAPITAL
   command NO is unrecognized
   r(199);

74 . NO CAPITAL
   command NO is unrecognized
   r(199);

75 . NO CAPITAL
   command NO is unrecognized
   r(199);

76 . ivregress 2sls S_allS_all1992  SLT_allSLT_all1992 melt_allmelt_all1992 LupLp_prv_empl LupLp_mix WupWp (
   >  w_hrl_allw_hr_alll1992 = SLT_allSLT_all1992 melt_allmelt_all1992 CPI1992 GFCG_index LupLp_prv_empl Lup
   > Lp_mix LuppubLp WupWp)

   Instrumental-variables 2SLS regression           Number of obs   =         15
                                                    Wald chi2(6)    =   69510.10
                                                    Prob > chi2     =     0.0000
                                                    R-squared       =     0.9998
                                                    Root MSE        =     .04683

------------------------------------------------------------------------------
       S_allS_all1992 | Coefficient  Std. err.      z    P>|z|     [95% conf. interval]
----------------------+-------------------------------------------------------
w_hrl_allw_hr_alll1992 |  -1.729902   .0187785   -92.12   0.000    -1.766707   -1.693097
    SLT_allSLT_all1992 |   .1319004   .0200403     6.58   0.000     .0926221    .1711786
  melt_allmelt_all1992 |   1.779797   .0188319    94.51   0.000     1.742887    1.816707
       LupLp_prv_empl |   .0511877   .0070116     7.30   0.000     .0374452    .0649303
            LupLp_mix |  -.0115632   .0035689    -3.24   0.001    -.0185582   -.0045682
                WupWp |  -.0529575   .0054647    -9.69   0.000    -.0636682   -.0422468
                _cons |   83.34792   2.437136    34.20   0.000     78.57123    88.12462
------------------------------------------------------------------------------

   Endogenous: w_hrl_allw_hr_alll1992
   Exogenous:  SLT_allSLT_all1992 melt_allmelt_all1992 LupLp_prv_empl LupLp_mix WupWp CPI1992
               GFCG_index LuppubLp
```

```
77 .  estat endog

  Tests of endogeneity
  H0: Variables are exogenous

  Durbin (score) chi2(1)          =  3.21351  (p = 0.0730)
  Wu-Hausman F(1,7)               =  1.90851  (p = 0.2096)

78 . prais S_allS_all1992 w_hrl_allw_hr_alll1992 SLT_allSLT_all1992 melt_allmelt_all1992 LupLp_prv_empl LupL
   > p_mix WupWp

   Number of gaps in sample = 1
   note: computations for rho restarted at each gap.

   Iteration 0:  rho = 0.0000
   Iteration 1:  rho = -0.3221
   Iteration 2:  rho = -0.4865
   Iteration 3:  rho = -0.5202
   Iteration 4:  rho = -0.5250
   Iteration 5:  rho = -0.5257
   Iteration 6:  rho = -0.5258
   Iteration 7:  rho = -0.5258
   Iteration 8:  rho = -0.5258
   Iteration 9:  rho = -0.5258

   Prais-Winsten AR(1) regression with iterated estimates

      Source |       SS           df       MS      Number of obs   =        15
-------------+----------------------------------   F(6, 8)         >  99999.00
       Model |  6736.73293         6  1122.78882   Prob > F        =    0.0000
    Residual |  .024715588         8  .003089448   R-squared       =    1.0000
-------------+----------------------------------   Adj R-squared   =    1.0000
       Total |  6736.75765        14  481.196975   Root MSE        =    .05558

------------------------------------------------------------------------------
       S_allS_all1992 | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
----------------------+-------------------------------------------------------
w_hrl_allw_hr_alll1992 |  -1.743417   .0196399   -88.77   0.000    -1.788707   -1.698127
    SLT_allSLT_all1992 |   .1233149   .0219676     5.61   0.001     .0726575    .1739723
  melt_allmelt_all1992 |   1.793921   .0195307    91.85   0.000     1.748883    1.838959
       LupLp_prv_empl |    .058007   .0078225     7.42   0.000     .0399683    .0760458
            LupLp_mix |  -.0111904   .0043702    -2.56   0.034    -.0212681   -.0011126
                WupWp |  -.0585777   .0058911    -9.94   0.000    -.0721627   -.0449928
                _cons |   84.03523    2.7088    31.02   0.000     77.78873    90.28174
----------------------+-------------------------------------------------------
                  rho |  -.5257683
------------------------------------------------------------------------------

   Durbin-Watson statistic (original)    = 2.572442
   Durbin-Watson statistic (transformed) = 2.236199

79 . reg d.S_allS_all1992 d.w_hrl_allw_hr_alll1992 d.SLT_allSLT_all1992 d.melt_allmelt_all1992 d.LupLp_prv_e
   > mpl d.LupLp_mix d.WupWp

      Source |       SS           df       MS      Number of obs   =        13
-------------+----------------------------------   F(6, 6)         =    669.47
       Model |  22.1068299         6  3.68447165   Prob > F        =    0.0000
    Residual |  .033021363         6   .00550356   R-squared       =    0.9985
-------------+----------------------------------   Adj R-squared   =    0.9970
       Total |  22.1398513        12  1.84498761   Root MSE        =    .07419

------------------------------------------------------------------------------
     D.S_allS_all1992 | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
----------------------+-------------------------------------------------------
w_hrl_allw_hr_alll1992 |
                  D1. |  -1.743856   .0629545   -27.70   0.000    -1.897901   -1.589812
                      |
    SLT_allSLT_all1992 |
                  D1. |   .0962451   .0521315     1.85   0.114    -.0313162    .2238064
                      |
  melt_allmelt_all1992 |
                  D1. |   1.810507   .0501234    36.12   0.000     1.687859    1.933155
                      |
       LupLp_prv_empl |
                  D1. |   .0383009   .0087573     4.37   0.005     .0168725    .0597293
```

LupLp_mix D1.	**-.0046868**	**.005448**	**-0.86**	**0.423**	**-.0180176**	**.008644**
WupWp D1.	**-.0315028**	**.0080185**	**-3.93**	**0.008**	**-.0511235**	**-.0118822**
_cons	**-.0475971**	**.0587421**	**-0.81**	**0.449**	**-.1913337**	**.0961396**

80 . vif

Variable	VIF	1/VIF
w_hrl_a~1992 D1.	**25.42**	**0.039336**
melt_al~1992 D1.	**17.26**	**0.057939**
SLT_all~1992 D1.	**5.60**	**0.178512**
LupLp_prv_~l D1.	**3.52**	**0.284159**
WupWp D1.	**3.48**	**0.287340**
LupLp_mix D1.	**2.08**	**0.481791**
Mean VIF	**9.56**	

81 . hettest

Breusch–Pagan/Cook–Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variable: Fitted values of **D.S_allS_all1992**

H0: Constant variance

chi2(**1**) = **0.46**
Prob > chi2 = **0.4962**

82 . hettest, rhs

Breusch–Pagan/Cook–Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variables: All independent variables

H0: Constant variance

chi2(**6**) = **9.02**
Prob > chi2 = **0.1725**

83 . ovtest

Ramsey RESET test for omitted variables
Omitted: Powers of fitted values of **D.S_allS_all1992**

H0: Model has no omitted variables

F(**3, 3**) = **1.20**
Prob > F = **0.4409**

84 . ivregress 2sls S_prodS_prod1992 SLT_prodSLT_prod1992 melt_prodmelt_prod1992 LupLp_prv_empl LupLp_mix Wu
> pWp (w_hrl_prodw_hr_prod1992 = SLT_prodSLT_prod1992 melt_prodmelt_prod1992 CPI1992 GFCG_index LupLp_pr
> v_empl LupLp_mix WupWp)

Instrumental-variables 2SLS regression

Number of obs	=	**15**
Wald chi2(**6**)	=	**3811.85**
Prob > chi2	=	**0.0000**
R-squared	=	**0.9962**
Root MSE	=	**.3664**

S_prodS_prod1992	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
w_hrl_prodw_hr_prod1992	**-1.204693**	**.048465**	**-24.86**	**0.000**	**-1.299682**	**-1.109703**
SLT_prodSLT_prod1992	**-.1274549**	**.1621158**	**-0.79**	**0.432**	**-.4451961**	**.1902863**
melt_prodmelt_prod1992	**1.251112**	**.0493938**	**25.33**	**0.000**	**1.154302**	**1.347922**
LupLp_prv_empl	**.0930282**	**.0800593**	**1.16**	**0.245**	**-.0638851**	**.2499415**
LupLp_mix	**.0282314**	**.0248359**	**1.14**	**0.256**	**-.0204461**	**.0769089**
WupWp	**.007614**	**.0432787**	**0.18**	**0.860**	**-.0772108**	**.0924388**
_cons	**96.16855**	**14.44571**	**6.66**	**0.000**	**67.85547**	**124.4816**

Endogenous: **w_hrl_prodw_hr_prod1992**
Exogenous: **SLT_prodSLT_prod1992 melt_prodmelt_prod1992 LupLp_prv_empl LupLp_mix WupWp CPI1992 GFCG_index**

```
85 .  estat endog

  Tests of endogeneity
  H0: Variables are exogenous

  Durbin (score) chi2(1)          =   .40021  (p = 0.5270)
  Wu-Hausman F(1,7)               =  .191884  (p = 0.6746)

86 . prais S_prodS_prod1992 w_hrl_prodw_hr_prod1992 SLT_prodSLT_prod1992 melt_prodmelt_prod1992 LupLp_prv_em
   > pl LupLp_mix WupWp

   Number of gaps in sample = 1
   note: computations for rho restarted at each gap.

   Iteration 0:  rho = 0.0000
   Iteration 1:  rho = -0.2333
   Iteration 2:  rho = -0.3648
   Iteration 3:  rho = -0.4079
   Iteration 4:  rho = -0.4189
   Iteration 5:  rho = -0.4214
   Iteration 6:  rho = -0.4220
   Iteration 7:  rho = -0.4221
   Iteration 8:  rho = -0.4222
   Iteration 9:  rho = -0.4222
   Iteration 10: rho = -0.4222
   Iteration 11: rho = -0.4222

   Prais-Winsten AR(1) regression with iterated estimates
```

Source	SS	df	MS		
				Number of obs	= 15
				F(6, 8)	= 5700.33
Model	**7603.54259**	**6**	**1267.2571**	Prob > F	= 0.0000
Residual	**1.77850345**	**8**	**.222312931**	R-squared	= 0.9998
				Adj R-squared	= 0.9996
Total	**7605.32109**	**14**	**543.237221**	Root MSE	= .4715

S_prodS_prod1992	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
w_hrl_prodw_hr_prod1992	**-1.216526**	**.0518578**	**-23.46**	**0.000**	**-1.33611**	**-1.096942**
SLT_prodSLT_prod1992	**-.1515977**	**.2019967**	**-0.75**	**0.474**	**-.6174029**	**.3142074**
melt_prodmelt_prod1992	**1.257667**	**.0547982**	**22.95**	**0.000**	**1.131302**	**1.384032**
LupLp_prv_empl	**.1246067**	**.0927672**	**1.34**	**0.216**	**-.0893149**	**.3385282**
LupLp_mix	**.0297175**	**.0320267**	**0.93**	**0.381**	**-.0441363**	**.1035713**
WupWp	**-.015384**	**.0510593**	**-0.30**	**0.771**	**-.1331268**	**.1023589**
_cons	**98.40907**	**18.04808**	**5.45**	**0.001**	**56.79012**	**140.028**
rho	**-.4221784**					

Durbin-Watson statistic (original)   = **2.305751**
Durbin-Watson statistic (transformed) = **2.199376**

```
87 . reg d.S_prodS_prod1992 d.w_hrl_prodw_hr_prod1992 d.SLT_prodSLT_prod1992 d.melt_prodmelt_prod1992 d.LupL
> p_prv_empl d.LupLp_mix d.WupWp
```

Source	SS	df	MS		
Model	**483.181843**	**6**	**80.5303072**	Number of obs	= **13**
Residual	**1.80001207**	**6**	**.300002012**	F(6, 6)	= **268.43**
				Prob > F	= **0.0000**
				R-squared	= **0.9963**
				Adj R-squared	= **0.9926**
Total	**484.981855**	**12**	**40.4151546**	Root MSE	= **.54772**

D.S_prodS_prod1992	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
w_hrl_prodw_hr_prod1992 D1.	**-.8067168**	**.1387754**	**-5.81**	**0.001**	**-1.146288**	**-.4671456**
SLT_prodSLT_prod1992 D1.	**.8583135**	**.4404511**	**1.95**	**0.099**	**-.2194314**	**1.936058**
melt_prodmelt_prod1992 D1.	**1.27012**	**.1241546**	**10.23**	**0.000**	**.9663248**	**1.573915**
LupLp_prv_empl D1.	**-.1755818**	**.1404387**	**-1.25**	**0.258**	**-.5192228**	**.1680592**
LupLp_mix D1.	**-.0212387**	**.0501599**	**-0.42**	**0.687**	**-.1439756**	**.1014981**
WupWp D1.	**.1197132**	**.0784341**	**1.53**	**0.178**	**-.072208**	**.3116344**
_cons	**-.882958**	**.4891493**	**-1.81**	**0.121**	**-2.079863**	**.3139472**

```
88 . vif
```

Variable	VIF	1/VIF
SLT_pro~1992 D1.	**36.06**	**0.027730**
LupLp_prv_~l D1.	**16.60**	**0.060230**
w_hrl_p~1992 D1.	**13.39**	**0.074668**
WupWp D1.	**6.11**	**0.163703**
LupLp_mix D1.	**3.23**	**0.309815**
melt_pr~1992 D1.	**2.11**	**0.474617**
Mean VIF	**12.92**	

```
89 . hettest

Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variable: Fitted values of D.S_prodS_prod1992

H0: Constant variance

    chi2(1) =   0.01
Prob > chi2 = 0.9331
```

```
 90 . hettest, rhs

    Breusch–Pagan/Cook–Weisberg test for heteroskedasticity
    Assumption: Normal error terms
    Variables: All independent variables

    H0: Constant variance

        chi2(6) =   3.84
    Prob > chi2 = 0.6977

 91 . ovtest

    Ramsey RESET test for omitted variables
    Omitted: Powers of fitted values of D.S_prodS_prod1992

    H0: Model has no omitted variables

     F(3, 3) =   4.34
    Prob > F = 0.1296

 92 . clear

 93 . import excel "C:\Users\40018815\OneDrive - Edinburgh Napier University\Surplus Value paper\SER\EXCEL\FU
    > LL MATRIX.xlsx", sheet("Sheet1") firstrow
    (197 vars, 29 obs)

 94 . 2008-2020 w CAPITAL
    2008 is not a valid command name
    r(199);

 95 . 2008-2020 w CAPITAL
    2008 is not a valid command name
    r(199);

 96 . 2008-2020 w CAPITAL
    2008 is not a valid command name
    r(199);

 97 . 2008-2020 w CAPITAL
    2008 is not a valid command name
    r(199);

 98 . 2008-2020 w CAPITAL
    2008 is not a valid command name
    r(199);

 99 . 2008-2020 w CAPITAL
    2008 is not a valid command name
    r(199);

100 . drop in 1/16
    (16 observations deleted)

101 . ivregress 2sls S_allS_all1992  SLT_allSLT_all1992 melt_allmelt_all1992 GFCG_index LupLp_prv_empl LupLp_
    > mix WupWp ( w_hrl_allw_hr_all1992 = SLT_allSLT_all1992 melt_allmelt_all1992 CPI1992 GFCG_index LupLp_p
    > rv_empl LupLp_mix LuppubLp WupWp)

    Instrumental-variables 2SLS regression           Number of obs   =         13
                                                     Wald chi2(7)    =   11655.05
                                                     Prob > chi2     =     0.0000
                                                     R-squared       =     0.9989
                                                     Root MSE        =     .14045
```

S_allS_all1992	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
w_hrl_allw_hr_alll1992	**-1.361321**	**.0851645**	**-15.98**	**0.000**	**-1.528241**	**-1.194402**
SLT_allSLT_all1992	**.1867864**	**.1183163**	**1.58**	**0.114**	**-.0451093**	**.418682**
melt_allmelt_all1992	**1.345842**	**.0900335**	**14.95**	**0.000**	**1.16938**	**1.522305**
GFCG_index	**.0159594**	**.0113103**	**1.41**	**0.158**	**-.0062084**	**.0381271**
LupLp_prv_empl	**.0127629**	**.0112334**	**1.14**	**0.256**	**-.0092542**	**.03478**
LupLp_mix	**-.0949516**	**.0426634**	**-2.23**	**0.026**	**-.1785704**	**-.0113328**
WupWp	**-.0115073**	**.0151258**	**-0.76**	**0.447**	**-.0411534**	**.0181387**
_cons	**87.83093**	**9.314702**	**9.43**	**0.000**	**69.57445**	**106.0874**

Endogenous: **w_hrl_allw_hr_alll1992**
Exogenous: **SLT_allSLT_all1992 melt_allmelt_all1992 GFCG_index LupLp_prv_empl LupLp_mix WupWp CPI1992 LuppubLp**

```
102 .  estat endog

  Tests of endogeneity
  H0: Variables are exogenous

  Durbin (score) chi2(1)          =  2.29838  (p = 0.1295)
  Wu-Hausman F(1,4)               =  .859076  (p = 0.4065)

103 . prais S_allS_all1992 w_hrl_allw_hr_alll1992 SLT_allSLT_all1992 melt_allmelt_all1992 GFCG_index LupLp_pr
> v_empl LupLp_mix WupWp
time variable not set, use tsset varname ...
r(111);

104 . reg d.S_allS_all1992 d.w_hrl_allw_hr_alll1992 d.SLT_allSLT_all1992 d.melt_allmelt_all1992 d. GFCG_index
>  d.LupLp_prv_empl d.LupLp_mix d.WupWp
time variable not set
r(111);

105 . tset YEAR

Time variable: YEAR, 2008 to 2020
        Delta: 1 unit

106 . prais S_allS_all1992 w_hrl_allw_hr_alll1992 SLT_allSLT_all1992 melt_allmelt_all1992 GFCG_index LupLp_pr
> v_empl LupLp_mix WupWp

Iteration 0:  rho = 0.0000
Iteration 1:  rho = 0.1007
Iteration 2:  rho = 0.2853
Iteration 3:  rho = 0.5461
Iteration 4:  rho = 0.7545
Iteration 5:  rho = 0.8412
Iteration 6:  rho = 0.8701
Iteration 7:  rho = 0.8797
Iteration 8:  rho = 0.8829
Iteration 9:  rho = 0.8840
Iteration 10: rho = 0.8844
Iteration 11: rho = 0.8845
Iteration 12: rho = 0.8846
Iteration 13: rho = 0.8846
Iteration 14: rho = 0.8846
Iteration 15: rho = 0.8846
Iteration 16: rho = 0.8846

Prais-Winsten AR(1) regression with iterated estimates

      Source |       SS           df       MS      Number of obs   =        13
-------------+----------------------------------   F(7, 5)         =   6104.94
       Model |  1158.3207          7  165.474386   Prob > F        =    0.0000
    Residual |  .135524908         5  .027104982   R-squared       =    0.9999
-------------+----------------------------------   Adj R-squared   =    0.9997
       Total |  1158.45623        12   96.538019   Root MSE        =    .16464
```

S_allS_all1992	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
w_hrl_allw_hr_alll1992	-1.506509	.0692204	-21.76	0.000	-1.684445	-1.328572
SLT_allSLT_all1992	.0653882	.0907414	0.72	0.503	-.1678701	.2986465
melt_allmelt_all1992	1.484912	.0754006	19.69	0.000	1.291088	1.678735
GFCG_index	.0154847	.0109186	1.42	0.215	-.0125824	.0435519
LupLp_prv_empl	.0065244	.0088212	0.74	0.493	-.0161513	.0292001
LupLp_mix	-.0584575	.031945	-1.83	0.127	-.1405748	.0236599
WupWp	-.0157704	.0159694	-0.99	0.369	-.056821	.0252801
_cons	99.39876	7.026248	14.15	0.000	81.33722	117.4603
rho	.8845769					

Durbin-Watson statistic (original)   = **1.773847**
Durbin-Watson statistic (transformed) = **0.768490**

```
107 . reg d.S_allS_all1992 d.w_hrl_allw_hr_alll1992 d.SLT_allSLT_all1992 d.melt_allmelt_all1992 d. GFCG_index
>  d.LupLp_prv_empl d.LupLp_mix d.WupWp
```

Source	SS	df	MS		
Model	163.464415	7	23.3520593	Number of obs	= 12
Residual	.129809462	4	.032452366	F(7, 4)	= 719.58
Total	163.594225	11	14.8722022	Prob > F	= 0.0000
				R-squared	= 0.9992
				Adj R-squared	= 0.9978
				Root MSE	= .18015

D.S_allS_all1992	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
w_hrl_allw_hr_alll1992 D1.	-1.474364	.0918652	-16.05	0.000	-1.729422	-1.219305
SLT_allSLT_all1992 D1.	.1168542	.1280577	0.91	0.413	-.2386911	.4723995
melt_allmelt_all1992 D1.	1.455626	.0957756	15.20	0.000	1.189711	1.721542
GFCG_index D1.	.0133447	.011748	1.14	0.319	-.0192729	.0459623
LupLp_prv_empl D1.	.0076074	.0092921	0.82	0.459	-.0181917	.0334065
LupLp_mix D1.	-.0496679	.0352735	-1.41	0.232	-.1476028	.0482671
WupWp D1.	-.020037	.0182793	-1.10	0.335	-.0707885	.0307144
_cons	.0534504	.0894584	0.60	0.582	-.1949258	.3018266

```
108 . vif
```

Variable	VIF	1/VIF
melt_al~1992 D1.	64.22	0.015572
w_hrl_a~1992 D1.	39.50	0.025316
SLT_all~1992 D1.	20.44	0.048915
GFCG_index D1.	4.05	0.246863
WupWp D1.	2.68	0.373463
LupLp_mix D1.	2.28	0.439260
LupLp_prv_~l D1.	2.18	0.458202
Mean VIF	19.34	

```
109 . hettest

    Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
    Assumption: Normal error terms
    Variable: Fitted values of D.S_allS_all1992

    H0: Constant variance

        chi2(1) =   0.17
    Prob > chi2 = 0.6818

110 . hettest, rhs

    Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
    Assumption: Normal error terms
    Variables: All independent variables

    H0: Constant variance

        chi2(7) =   5.21
    Prob > chi2 = 0.6349

111 . ovtest

    Ramsey RESET test for omitted variables
    Omitted: Powers of fitted values of D.S_allS_all1992

    H0: Model has no omitted variables

     F(3, 1) =  66.26
    Prob > F = 0.0900

112 . ivregress 2sls S_prodS_prod1992 SLT_prodSLT_prod1992 melt_prodmelt_prod1992  GFCG_index LupLp_prv_empl
    > LupLp_mix WupWp ( w_hrl_prodw_hr_prod1992 = SLT_prodSLT_prod1992 melt_prodmelt_prod1992 CPI1992 GFCG_in
    > dex LupLp_prv_empl LupLp_mix WupWp)

    Instrumental-variables 2SLS regression          Number of obs   =         13
                                                    Wald chi2(7)    =     460.71
                                                    Prob > chi2     =     0.0000
                                                    R-squared       =     0.9723
                                                    Root MSE        =     1.0675

------------------------------------------------------------------------------
       S_prodS_prod1992 | Coefficient  Std. err.      z    P>|z|     [95% conf. interval]
------------------------+-----------------------------------------------------
w_hrl_prodw_hr_prod1992 |  -1.033839   .2055966    -5.03   0.000      -1.4368   -.6308766
   SLT_prodSLT_prod1992 |   .6356562   .4896667     1.30   0.194    -.3240729    1.595385
 melt_prodmelt_prod1992 |   .5958488    .177761     3.35   0.001     .2474437     .944254
             GFCG_index |   .1017613   .0415227     2.45   0.014     .0203784    .1831442
         LupLp_prv_empl |   .3505585   .1248359     2.81   0.005     .1058846    .5952323
              LupLp_mix |  -.3364284    .182554    -1.84   0.065    -.6942276    .0213708
                  WupWp |   -.121737    .158908    -0.77   0.444    -.4331909    .1897168
                  _cons |    83.8367   51.45278     1.63   0.103     -17.0089    184.6823
------------------------------------------------------------------------------
    Endogenous: w_hrl_prodw_hr_prod1992
    Exogenous:  SLT_prodSLT_prod1992 melt_prodmelt_prod1992 GFCG_index LupLp_prv_empl LupLp_mix
                WupWp CPI1992

113 .  estat endog

      Tests of endogeneity
      H0: Variables are exogenous

      Durbin (score) chi2(1)          =  3.80673  (p = 0.0510)
      Wu-Hausman F(1,4)               =  1.65631  (p = 0.2675)
```

```
114 . prais S_prodS_prod1992 w_hrl_prodw_hr_prod1992 SLT_prodSLT_prod1992 melt_prodmelt_prod1992  GFCG_index
> LupLp_prv_empl LupLp_mix WupWp

Iteration 0:  rho = 0.0000
Iteration 1:  rho = 0.2799
Iteration 2:  rho = 0.4989
Iteration 3:  rho = 0.5685
Iteration 4:  rho = 0.5891
Iteration 5:  rho = 0.5958
Iteration 6:  rho = 0.5981
Iteration 7:  rho = 0.5989
Iteration 8:  rho = 0.5992
Iteration 9:  rho = 0.5993
Iteration 10: rho = 0.5994
Iteration 11: rho = 0.5994
Iteration 12: rho = 0.5994
Iteration 13: rho = 0.5994
Iteration 14: rho = 0.5994

Prais-Winsten AR(1) regression with iterated estimates

      Source |       SS           df       MS      Number of obs   =        13
-------------+----------------------------------   F(7, 5)         =    161.31
       Model |  2418.18331         7  345.454759   Prob > F        =    0.0000
    Residual |  10.7075587         5  2.14151175   R-squared       =    0.9956
-------------+----------------------------------   Adj R-squared   =    0.9894
       Total |  2428.89087        12  202.407573   Root MSE        =    1.4634

------------------------------------------------------------------------------
S_prodS_prod1992 | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
-----------------+------------------------------------------------------------
w_hrl_prodw_hr_prod1992 |  -1.010472   .2063926    -4.90   0.004    -1.541021   -.4799228
   SLT_prodSLT_prod1992 |   .7937352   .5879886     1.35   0.235    -.7177376    2.305208
 melt_prodmelt_prod1992 |   .5792822   .2262962     2.56   0.051    -.0024306    1.160995
             GFCG_index |   .0903717   .0679114     1.33   0.241       -.0842    .2649435
          LupLp_prv_empl |   .3051484   .1439194     2.12   0.087    -.0648083    .6751051
               LupLp_mix |  -.3859011   .2286508    -1.69   0.152    -.9736668    .2018647
                   WupWp |  -.1136311   .1772745    -0.64   0.550    -.5693297    .3420674
                   _cons |      76.33   56.65577     1.35   0.236     -69.3083    221.9683
-----------------+------------------------------------------------------------
                     rho |   .5993805
------------------------------------------------------------------------------

Durbin-Watson statistic (original)    = 1.387820
Durbin-Watson statistic (transformed) = 1.816133

115 . reg d.S_prodS_prod1992 d.w_hrl_prodw_hr_prod1992 d.SLT_prodSLT_prod1992 d.melt_prodmelt_prod1992  d.GFC
> G_index d.LupLp_prv_empl d.LupLp_mix d.WupWp

      Source |       SS           df       MS      Number of obs   =        12
-------------+----------------------------------   F(7, 4)         =     43.31
       Model |  546.231771         7  78.0331102   Prob > F        =    0.0013
    Residual |  7.20700835         4  1.80175209   R-squared       =    0.9870
-------------+----------------------------------   Adj R-squared   =    0.9642
       Total |  553.43878        11  50.3126163   Root MSE        =    1.3423

------------------------------------------------------------------------------
D.S_prodS_prod1992 | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
-------------------+----------------------------------------------------------
w_hrl_prodw_hr_prod1992 |
                D1. |  -.6273833   .2837537    -2.21   0.092     -1.41521    .1604434
                    |
   SLT_prodSLT_prod1992 |
                D1. |   1.474676   .6211574     2.37   0.076    -.2499331    3.199286
                    |
 melt_prodmelt_prod1992 |
                D1. |   .7147126   .1950874     3.66   0.022     .1730633    1.256362
                    |
             GFCG_index |
                D1. |  -.1388417   .1364373    -1.02   0.366    -.5176524     .239969
                    |
          LupLp_prv_empl |
                D1. |  -.0786216   .2361618    -0.33   0.756     -.734312    .5770689
                    |
               LupLp_mix |
```

D1.	.2420985	.3995701	0.61	0.577	-.867286	1.351483
WupWp						
D1.	.033984	.1622132	0.21	0.844	-.416392	.4843599
_cons	1.378257	.8488777	1.62	0.180	-.9786053	3.735119

```
116 . vif
```

Variable	VIF	1/VIF
LupLp_prv_~l		
D1.	**25.39**	**0.039384**
w_hrl_p~1992		
D1.	**25.29**	**0.039548**
GFCG_index		
D1.	**9.84**	**0.101616**
SLT_pro~1992		
D1.	**9.00**	**0.111080**
melt_pr~1992		
D1.	**8.44**	**0.118533**
LupLp_mix		
D1.	**5.26**	**0.190056**
WupWp		
D1.	**3.80**	**0.263295**
Mean VIF	**12.43**	

```
117 . hettest

    Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
    Assumption: Normal error terms
    Variable: Fitted values of D.S_prodS_prod1992

    H0: Constant variance

        chi2(1) =   0.01
    Prob > chi2 = 0.9345

118 . hettest, rhs

    Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
    Assumption: Normal error terms
    Variables: All independent variables

    H0: Constant variance

        chi2(7) =   5.42
    Prob > chi2 = 0.6087

119 . ovtest

    Ramsey RESET test for omitted variables
    Omitted: Powers of fitted values of D.S_prodS_prod1992

    H0: Model has no omitted variables

     F(3, 1) = 545.40
    Prob > F = 0.0315

120 . NO CAPITAL
    command NO is unrecognized
    r(199);
```

```
121 . NO CAPITAL
command NO is unrecognized
r(199);

122 . NO CAPITAL
command NO is unrecognized
r(199);

123 . NO CAPITAL
command NO is unrecognized
r(199);

124 . NO CAPITAL
command NO is unrecognized
r(199);

125 . ivregress 2sls S_allS_all1992  SLT_allSLT_all1992 melt_allmelt_all1992 LupLp_prv_empl LupLp_mix WupWp (
>  w_hrl_allw_hr_alll1992 = SLT_allSLT_all1992 melt_allmelt_all1992 CPI1992 GFCG_index LupLp_prv_empl Lup
> Lp_mix LuppubLp WupWp)

Instrumental-variables 2SLS regression            Number of obs   =         13
                                                  Wald chi2(6)    =   11956.95
                                                  Prob > chi2     =     0.0000
                                                  R-squared       =     0.9989
                                                  Root MSE        =     .13866

------------------------------------------------------------------------------
       S_allS_all1992 | Coefficient  Std. err.      z    P>|z|     [95% conf. interval]
----------------------+-------------------------------------------------------
w_hrl_allw_hr_alll1992 |    -1.4265   .0706343   -20.20   0.000    -1.564941   -1.288059
   SLT_allSLT_all1992 |     .059299   .0754149     0.79   0.432    -.0885115    .2071095
 melt_allmelt_all1992 |    1.438294   .0609608    23.59   0.000     1.318813    1.557775
       LupLp_prv_empl |    .0059105   .0099999     0.59   0.554     -.013689    .0255099
            LupLp_mix |   -.0456993   .0242183    -1.89   0.059    -.0931663    .0017678
                WupWp |    .0012776   .0119569     0.11   0.915    -.0221574    .0247127
                _cons |    94.36054   7.980544    11.82   0.000     78.71896    110.0021
------------------------------------------------------------------------------
Endogenous: w_hrl_allw_hr_alll1992
Exogenous:  SLT_allSLT_all1992 melt_allmelt_all1992 LupLp_prv_empl LupLp_mix WupWp CPI1992
            GFCG_index LuppubLp

126 .  estat endog

  Tests of endogeneity
  H0: Variables are exogenous

  Durbin (score) chi2(1)          =  .961073  (p = 0.3269)
  Wu-Hausman F(1,5)               =  .399152  (p = 0.5553)

127 . prais S_allS_all1992 w_hrl_allw_hr_alll1992 SLT_allSLT_all1992 melt_allmelt_all1992 LupLp_prv_empl LupL
> p_mix WupWp

Iteration 0:  rho = 0.0000
Iteration 1:  rho = -0.0883
Iteration 2:  rho = -0.2166
Iteration 3:  rho = -0.3978
Iteration 4:  rho = -0.6139
Iteration 5:  rho = -0.7592
Iteration 6:  rho = -0.7973
Iteration 7:  rho = -0.8024
Iteration 8:  rho = -0.8030
Iteration 9:  rho = -0.8031
Iteration 10: rho = -0.8031
Iteration 11: rho = -0.8031

Prais-Winsten AR(1) regression with iterated estimates

      Source |       SS           df       MS      Number of obs   =        13
-------------+----------------------------------   F(6, 6)         >  99999.00
       Model |  14557.6471         6  2426.27451   Prob > F        =    0.0000
    Residual |  .136624033         6  .022770672   R-squared       =    1.0000
-------------+----------------------------------   Adj R-squared   =    1.0000
       Total |  14557.7837        12  1213.14864   Root MSE        =     .1509
```

S_allS_all1992	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
w_hrl_allw_hr_alll1992	-1.488837	.0497241	-29.94	0.000	-1.610507	-1.367166
SLT_allSLT_all1992	-.0077331	.0544426	-0.14	0.892	-.1409494	.1254831
melt_allmelt_all1992	1.470507	.038524	38.17	0.000	1.376242	1.564772
LupLp_prv_empl	.028839	.0116743	2.47	0.048	.0002729	.057405
LupLp_mix	-.0806821	.0232184	-3.47	0.013	-.1374956	-.0238686
WupWp	.0143251	.0111007	1.29	0.244	-.0128374	.0414876
_cons	102.3052	7.145301	14.32	0.000	84.82129	119.7891
rho	-.8030689					

Durbin-Watson statistic (original)   = 2.131358
Durbin-Watson statistic (transformed) = 2.325114

128 . reg d.S_allS_all1992 d.w_hrl_allw_hr_alll1992 d.SLT_allSLT_all1992 d.melt_allmelt_all1992 d.LupLp_prv_e
> mpl d.LupLp_mix d.WupWp

Source	SS	df	MS		
Model	163.422542	6	27.2370904	Number of obs	= 12
Residual	.171682566	5	.034336513	F(6, 5)	= 793.24
				Prob > F	= 0.0000
Total	163.594225	11	14.8722022	R-squared	= 0.9990
				Adj R-squared	= 0.9977
				Root MSE	= .1853

D.S_allS_all1992	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
w_hrl_allw_hr_alll1992 D1.	-1.487891	.093697	-15.88	0.000	-1.728747	-1.247036
SLT_allSLT_all1992 D1.	.0867309	.1288673	0.67	0.531	-.2445331	.417995
melt_allmelt_all1992 D1.	1.492821	.0925803	16.12	0.000	1.254835	1.730806
LupLp_prv_empl D1.	.005804	.0094175	0.62	0.565	-.0184045	.0300126
LupLp_mix D1.	-.0218575	.0261199	-0.84	0.441	-.0890007	.0452857
WupWp D1.	-.0169305	.0185908	-0.91	0.404	-.0647197	.0308587
_cons	.0724146	.090402	0.80	0.459	-.1599711	.3048004

129 . vif

Variable	VIF	1/VIF
melt_al~1992 D1.	56.71	0.017633
w_hrl_a~1992 D1.	38.84	0.025749
SLT_all~1992 D1.	19.57	0.051107
WupWp D1.	2.62	0.382014
LupLp_prv_~l D1.	2.12	0.471979
LupLp_mix D1.	1.18	0.847593
Mean VIF	20.17	

```
130 . hettest

    Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
    Assumption: Normal error terms
    Variable: Fitted values of D.S_allS_all1992

    H0: Constant variance

        chi2(1) =   0.42
    Prob > chi2 = 0.5169

131 . hettest, rhs

    Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
    Assumption: Normal error terms
    Variables: All independent variables

    H0: Constant variance

        chi2(6) =   3.80
    Prob > chi2 = 0.7041

132 . ovtest

    Ramsey RESET test for omitted variables
    Omitted: Powers of fitted values of D.S_allS_all1992

    H0: Model has no omitted variables

     F(3, 2) =   4.63
    Prob > F = 0.1827

133 . ivregress 2sls S_prodS_prod1992 SLT_prodSLT_prod1992 melt_prodmelt_prod1992 LupLp_prv_empl LupLp_mix Wu
    > pWp ( w_hrl_prodw_hr_prod1992 = SLT_prodSLT_prod1992 melt_prodmelt_prod1992 CPI1992 GFCG_index LupLp_pr
    > v_empl LupLp_mix WupWp)

    Instrumental-variables 2SLS regression          Number of obs   =         13
                                                    Wald chi2(6)    =     346.81
                                                    Prob > chi2     =     0.0000
                                                    R-squared       =     0.9637
                                                    Root MSE        =     1.2223

------------------------------------------------------------------------------
       S_prodS_prod1992 | Coefficient  Std. err.      z    P>|z|     [95% conf. interval]
------------------------+-----------------------------------------------------
w_hrl_prodw_hr_prod1992 |  -.8433572   .2179438    -3.87   0.000    -1.270519   -.4161952
   SLT_prodSLT_prod1992 |   .3936735   .5491657     0.72   0.473    -.6826714    1.470018
 melt_prodmelt_prod1992 |   .5524691   .2025299     2.73   0.006     .1555177    .9494205
         LupLp_prv_empl |   .1795185   .1185158     1.51   0.130    -.0527682    .4118052
              LupLp_mix |  -.1866745   .1969719    -0.95   0.343    -.5727323    .1993834
                  WupWp |   .1444145   .1328317     1.09   0.277    -.1159308    .4047599
                  _cons |   78.76231   58.86722     1.34   0.181    -36.61533    194.1399
------------------------------------------------------------------------------
    Endogenous: w_hrl_prodw_hr_prod1992
    Exogenous:  SLT_prodSLT_prod1992 melt_prodmelt_prod1992 LupLp_prv_empl LupLp_mix WupWp
                CPI1992 GFCG_index

134 .  estat endog

      Tests of endogeneity
      H0: Variables are exogenous

      Durbin (score) chi2(1)          =  1.62832  (p = 0.2019)
      Wu-Hausman F(1,5)               =  .715952  (p = 0.4361)
```

```
135 . prais S_prodS_prod1992 w_hrl_prodw_hr_prod1992 SLT_prodSLT_prod1992 melt_prodmelt_prod1992 LupLp_prv_em
> pl LupLp_mix WupWp

Iteration 0:  rho = 0.0000
Iteration 1:  rho = 0.0410
Iteration 2:  rho = 0.1124
Iteration 3:  rho = 0.2326
Iteration 4:  rho = 0.4144
Iteration 5:  rho = 0.6280
Iteration 6:  rho = 0.7940
Iteration 7:  rho = 0.8741
Iteration 8:  rho = 0.8965
Iteration 9:  rho = 0.9003
Iteration 10: rho = 0.9009
Iteration 11: rho = 0.9010
Iteration 12: rho = 0.9010
Iteration 13: rho = 0.9010
Iteration 14: rho = 0.9010

Prais-Winsten AR(1) regression with iterated estimates

      Source |       SS           df       MS      Number of obs   =        13
-------------+----------------------------------   F(6, 6)         =    152.64
       Model |  1898.09087         6  316.348478   Prob > F        =    0.0000
    Residual |  12.4352452         6  2.07254087   R-squared       =    0.9935
-------------+----------------------------------   Adj R-squared   =    0.9870
       Total |  1910.52611        12  159.210509   Root MSE        =    1.4396

------------------------------------------------------------------------------
  S_prodS_prod1992 | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
-------------------+----------------------------------------------------------------
w_hrl_prodw_hr_prod1992 |  -.9699603   .1864066    -5.20   0.002    -1.426081   -.5138399
   SLT_prodSLT_prod1992 |   .7632301   .5284967     1.44   0.199    -.5299548    2.056415
 melt_prodmelt_prod1992 |   .7060137   .1899181     3.72   0.010     .2413008    1.170727
         LupLp_prv_empl |    .179371   .0930559     1.93   0.102    -.0483286    .4070706
              LupLp_mix |  -.2607689   .2014185    -1.29   0.243    -.7536221    .2320843
                  WupWp |  -.070126   .1493626    -0.47   0.655    -.4356031     .295351
                  _cons |   71.69911   52.70692     1.36   0.223    -57.27008    200.6683
-------------------+----------------------------------------------------------------
                    rho |    .900993
------------------------------------------------------------------------------

Durbin-Watson statistic (original)    = 1.851430
Durbin-Watson statistic (transformed) = 1.793356

136 . reg d.S_prodS_prod1992 d.w_hrl_prodw_hr_prod1992 d.SLT_prodSLT_prod1992 d.melt_prodmelt_prod1992 d.LupL
> p_prv_empl d.LupLp_mix d.WupWp

      Source |       SS           df       MS      Number of obs   =        12
-------------+----------------------------------   F(6, 5)         =     50.00
       Model |  544.365957         6  90.7276594   Prob > F        =    0.0003
    Residual |  9.07282323         5  1.81456465   R-squared       =    0.9836
-------------+----------------------------------   Adj R-squared   =    0.9639
       Total |   553.43878        11  50.3126163   Root MSE        =    1.3471

------------------------------------------------------------------------------
 D.S_prodS_prod1992 | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
--------------------+----------------------------------------------------------------
w_hrl_prodw_hr_prod1992 |
                D1. |  -.8453927   .1867247    -4.53   0.006    -1.325384   -.3654015
--------------------+----------------------------------------------------------------
   SLT_prodSLT_prod1992 |
                D1. |   1.153862   .5371084     2.15   0.084    -.2268192    2.534543
--------------------+----------------------------------------------------------------
 melt_prodmelt_prod1992 |
                D1. |   .6317176   .1778504     3.55   0.016     .1745387    1.088897
--------------------+----------------------------------------------------------------
         LupLp_prv_empl |
                D1. |   .1453403   .0859527     1.69   0.152    -.0756083    .3662889
--------------------+----------------------------------------------------------------
              LupLp_mix |
                D1. |  -.1057532   .2076402    -0.51   0.632    -.6395092    .4280028
--------------------+----------------------------------------------------------------
                  WupWp |
                D1. |  -.0600641   .1337839    -0.45   0.672    -.4039666    .2838384
------------------------------------------------------------------------------
```

_cons	**.6910698**	**.5162**	**1.34**	**0.238**	**-.6358645**	**2.018004**

```
137 . vif
```

Variable	VIF	1/VIF
w_hrl_p~1992		
D1.	**10.87**	**0.091976**
melt_pr~1992		
D1.	**6.96**	**0.143636**
SLT_pro~1992		
D1.	**6.68**	**0.149622**
LupLp_prv_~l		
D1.	**3.34**	**0.299429**
WupWp		
D1.	**2.57**	**0.389838**
LupLp_mix		
D1.	**1.41**	**0.708798**
Mean VIF	**5.31**	

```
138 . hettest

    Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
    Assumption: Normal error terms
    Variable: Fitted values of D.S_prodS_prod1992

    H0: Constant variance

        chi2(1) =   0.18
    Prob > chi2 = 0.6712

139 . hettest, rhs

    Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
    Assumption: Normal error terms
    Variables: All independent variables

    H0: Constant variance

        chi2(6) =   2.90
    Prob > chi2 = 0.8208

140 . ovtest

    Ramsey RESET test for omitted variables
    Omitted: Powers of fitted values of D.S_prodS_prod1992

    H0: Model has no omitted variables

     F(3, 2) =   0.31
    Prob > F = 0.8230

141 . log close
          name:  <unnamed>
           log:  C:\Users\40018815\OneDrive - Edinburgh Napier University\Surplus Value paper\SER\EXCEL\SER A
    > LL.smcl
      log type:  smcl
     closed on:  14 Jun 2025, 22:33:11
```