Notes:
1. Unicode is supported; see help unicode_advice.

running C:\ProgramData\App-V\A2C7604A-4DDA-4710-8242-EB109ECC83F1\BF0D73B5-9184
> -4142-97E9-6C2272C8DA41\Root\VFS\ProgramFilesX86\Stata15\sysprofile.do ...

```
1 . use "\\uni-mainz.de\dfs\profiles\settings\rohoehn\Desktop\Bachelorthesis\Regression_data_comp

2 . do "\\uni-mainz.de\dfs\profiles\settings\rohoehn\Desktop\Bachelorthesis\regression_dofile.do"

3 . global hs_group hs_group

4 . global t t

5 . global ylist  LN_Exporte_CHN_Others

6 . global xlist ln_GDP_CHN ln_GDP_others eu_ad us_ad

7 . describe $hs_group $t $ylist $xlist
```

variable name	storage type	display format	value label	variable label
hs_group	byte	%10.0g		**hs_group**
t	byte	%10.0g		**trend**
LN_Exporte_C~rs	double	%10.0g		**LN_Exporte_CHN_Others(=World-USA-EU)(US-Dollar)**
ln_GDP_CHN	double	%10.0g		**ln_GDP_CHN**
ln_GDP_others	double	%10.0g		**ln_GDP_others**
eu_ad	byte	%10.0g		**Dummy = 1 in Years of eu_ad_duties; =0 if not**
us_ad	byte	%10.0g		**Dummy = 1 in Years of us_ad_duties; =0 if not**

```
8 . summarize $hs_group $t $ylist $xlist
```

Variable	Obs	Mean	Std. Dev.	Min	Max
hs_group	**150**	**8**	**4.334968**	**1**	**15**
t	**150**	**5.5**	**2.881904**	**1**	**10**
LN_Export~rs	**150**	**18.95969**	**1.853105**	**14.3247**	**23.60867**
ln_GDP_CHN	**150**	**29.47431**	**.4532296**	**28.6434**	**30.03478**
ln_GDP_oth~s	**150**	**30.93717**	**.1806924**	**30.5929**	**31.12623**
eu_ad	**150**	**.16**	**.3678342**	**0**	**1**
us_ad	**150**	**.1066667**	**.3097231**	**0**	**1**

```
9 . sort $hs_group $t
```

```
10 . xtset $hs_group $t
        panel variable:  hs_group (strongly balanced)
         time variable:  t, 1 to 10
                 delta:  1 unit

11 . xtdescribe

hs_group:  1, 2, ..., 15                                    n =         15
       t:  1, 2, ..., 10                                    T =         10
           Delta(t) = 1 unit
           Span(t)  = 10 periods
           (hs_group*t uniquely identifies each observation)

Distribution of T_i:   min      5%     25%       50%       75%     95%     max
                        10      10      10        10        10      10      10

     Freq.  Percent    Cum. |  Pattern
----------------------------+----------
        15   100.00  100.00 |  1111111111
----------------------------+----------
        15   100.00         |  XXXXXXXXXX

12 . xtsum $hs_group $t $ylist $xlist

Variable                |      Mean   Std. Dev.       Min        Max |    Observations
------------------------+--------------------------------------------+----------------
hs_group overall        |         8   4.334968         1         15 |     N =      150
         between        |             4.472136         1         15 |     n =       15
         within         |                 0            8          8 |     T =       10
                        |                                            |
t        overall        |       5.5   2.881904         1         10 |     N =      150
         between        |                 0          5.5        5.5 |     n =       15
         within         |             2.881904         1         10 |     T =       10
                        |                                            |
LN_Ex~rs overall        |  18.95969   1.853105    14.3247   23.60867 |     N =      150
         between        |              1.64492   15.57517   21.99479 |     n =       15
         within         |             .9442831   16.78711   24.05029 |     T =       10
                        |                                            |
ln_GDP~N overall        |  29.47431   .4532296    28.6434   30.03478 |     N =      150
         between        |                 0      29.47431   29.47431 |     n =       15
         within         |             .4532296    28.6434   30.03478 |     T =       10
                        |                                            |
ln_GDP~s overall        |  30.93717   .1806924     30.5929   31.12623 |     N =      150
         between        |             3.68e-15   30.93717   30.93717 |     n =       15
         within         |             .1806924     30.5929   31.12623 |     T =       10
                        |                                            |
eu_ad    overall        |       .16   .3678342           0          1 |     N =      150
         between        |             .1549193           0         .3 |     n =       15
         within         |             .3357852        -.14         .86 |     T =       10
                        |                                            |
us_ad    overall        |  .1066667   .3097231           0          1 |     N =      150
         between        |             .1830951           0         .4 |     n =       15
         within         |             .2538297  -.2933333   .7066667 |     T =       10

13 . reg $ylist $xlist t

      Source |       SS           df       MS      Number of obs   =       150
-------------+----------------------------------   F(5, 144)       =      4.82
       Model |  73.371882         5  14.6743764   Prob > F        =    0.0004
    Residual |  438.293908       144  3.04370769   R-squared       =    0.1434
-------------+----------------------------------   Adj R-squared   =    0.1137
       Total |  511.66579        149  3.43399859   Root MSE        =    1.7446
```

LN_Exporte~rs	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
ln_GDP_CHN	**3.662358**	**4.4528**	**0.82**	**0.412**	**-5.138935**	**12.46365**
ln_GDP_others	**-2.713035**	**3.895977**	**-0.70**	**0.487**	**-10.41373**	**4.987657**
eu_ad	**-1.239933**	**.4939344**	**-2.51**	**0.013**	**-2.216231**	**-.2636342**
us_ad	**2.17977**	**.5115016**	**4.26**	**0.000**	**1.168749**	**3.190791**
t	**-.3431761**	**.5160879**	**-0.66**	**0.507**	**-1.363262**	**.6769103**
_cons	**-3.198819**	**54.01454**	**-0.06**	**0.953**	**-109.9626**	**103.565**

14 . xtreg $ylist $xlist,re

Random-effects GLS regression — Number of obs = **150**
Group variable: **hs_group** — Number of groups = **15**

R-sq: — Obs per group:
within = **0.0934** — min = **10**
between = **0.0040** — avg = **10.0**
overall = **0.0272** — max = **10**

Wald chi2(**4**) = **12.14**
corr(u_i, X) = **0** (assumed) — Prob > chi2 = **0.0163**

LN_Exporte~rs	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
ln_GDP_CHN	**-.2526427**	**.5946793**	**-0.42**	**0.671**	**-1.418193**	**.9129074**
ln_GDP_others	**1.479998**	**1.370713**	**1.08**	**0.280**	**-1.206549**	**4.166546**
eu_ad	**.3670716**	**.3184218**	**1.15**	**0.249**	**-.2570238**	**.9911669**
us_ad	**.3956146**	**.3661133**	**1.08**	**0.280**	**-.3219543**	**1.113183**
_cons	**-19.48172**	**26.96148**	**-0.72**	**0.470**	**-72.32526**	**33.36181**
sigma_u	**1.0432495**					
sigma_e	**.9564861**					
rho	**.54330591**	(fraction of variance due to u_i)				

15 . xtreg $ylist $xlist t_square ,re

Random-effects GLS regression — Number of obs = **150**
Group variable: **hs_group** — Number of groups = **15**

R-sq: — Obs per group:
within = **0.1201** — min = **10**
between = **0.0001** — avg = **10.0**
overall = **0.0277** — max = **10**

Wald chi2(**5**) = **15.60**
corr(u_i, X) = **0** (assumed) — Prob > chi2 = **0.0081**

LN_Exporte~rs	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
ln_GDP_CHN	**1.927012**	**1.350004**	**1.43**	**0.153**	**-.7189476**	**4.572972**
ln_GDP_others	**-1.13318**	**1.991791**	**-0.57**	**0.569**	**-5.037019**	**2.770659**
eu_ad	**.534214**	**.328225**	**1.63**	**0.104**	**-.1090952**	**1.177523**
us_ad	**.4801609**	**.3661302**	**1.31**	**0.190**	**-.2374411**	**1.197763**
t_square	**-.0195227**	**.0108691**	**-1.80**	**0.072**	**-.0408258**	**.0017804**
_cons	**-2.165339**	**28.40341**	**-0.08**	**0.939**	**-57.83501**	**53.50433**
sigma_u	**1.0442068**					
sigma_e	**.94598166**					
rho	**.54923479**	(fraction of variance due to u_i)				

```
16 . xtreg $ylist $xlist D07 D08 D09 D10 D11 D12 D13,re

Random-effects GLS regression                   Number of obs     =       150
Group variable: hs_group                        Number of groups  =        15

R-sq:                                           Obs per group:
     within  = 0.4911                                         min =        10
     between = 0.0577                                         avg =      10.0
     overall = 0.0641                                         max =        10

                                                Wald chi2(11)     =     100.60
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =     0.0000
```

LN_Exporte~rs	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
ln_GDP_CHN	3.14411	.8050005	3.91	0.000	1.566338	4.721882
ln_GDP_others	-9.442677	2.286371	-4.13	0.000	-13.92388	-4.961472
eu_ad	1.478147	.2871689	5.15	0.000	.9153063	2.040988
us_ad	.5364521	.3014307	1.78	0.075	-.0543412	1.127245
D07	.6460159	.2827368	2.28	0.022	.091862	1.20017
D08	1.336067	.3129811	4.27	0.000	.7226351	1.949498
D09	.3011005	.2557923	1.18	0.239	-.2002433	.8024443
D10	1.733481	.3339445	5.19	0.000	1.078961	2.388
D11	3.063397	.4397469	6.97	0.000	2.201508	3.925285
D12	2.36887	.4312655	5.49	0.000	1.523606	3.214135
D13	.1394624	.3325825	0.42	0.675	-.5123874	.7913121
_cons	217.1663	48.16929	4.51	0.000	122.7563	311.5764
sigma_u	1.0609141					
sigma_e	.73700251					
rho	.67449574	(fraction of variance due to u_i)				

```
17 . xtreg d.($ylist $xlist D07 D08 D09 D10 D11 D12 ),re

Random-effects GLS regression                   Number of obs     =       135
Group variable: hs_group                        Number of groups  =        15

R-sq:                                           Obs per group:
     within  = 0.4302                                         min =         9
     between = 0.1445                                         avg =       9.0
     overall = 0.4132                                         max =         9

                                                Wald chi2(10)     =      87.30
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =     0.0000
```

D. LN_Exporte~rs	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
ln_GDP_CHN D1.	5.257653	7.480601	0.70	0.482	-9.404056	19.91936
ln_GDP_others D1.	-11.45385	5.671605	-2.02	0.043	-22.56999	-.3377101
eu_ad D1.	2.580212	.5052402	5.11	0.000	1.58996	3.570465
us_ad D1.	1.633269	.5699878	2.87	0.004	.5161138	2.750425
D07 D1.	.6994416	.3757093	1.86	0.063	-.036935	1.435818
D08 D1.	1.430664	.6930576	2.06	0.039	.0722961	2.789032
D09 D1.	.3825958	.8734396	0.44	0.661	-1.329314	2.094506
D10						

D1.	**2.117425**	**.4739127**	**4.47**	**0.000**	**1.188573**	**3.046277**
D11 D1.	**3.589021**	**.4899819**	**7.32**	**0.000**	**2.628674**	**4.549368**
D12 D1.	**2.743249**	**.3633429**	**7.55**	**0.000**	**2.03111**	**3.455388**
_cons	**-.3321114**	**.9076004**	**-0.37**	**0.714**	**-2.110975**	**1.446753**

sigma_u	**0**	
sigma_e	**1.0173085**	
rho	**0**	(fraction of variance due to u_i)

```
18 . quietly xtreg $ylist $xlist, re

19 . xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

        LN_Exporte_CHN_Others[hs_group,t] = Xb + u[hs_group] + e[hs_group,t]

        Estimated results:
                         |       Var     sd = sqrt(Var)
                ---------+------------------------------
                LN_Exp~rs |    3.433999       1.853105
                        e |    .9148657       .9564861
                        u |     1.08837       1.043249

        Test:   Var(u) = 0
                                chibar2(01) =   218.44
                              Prob > chibar2 =   0.0000

20 . global hs_group hs_group

21 . global t t

22 . global ylist  LN_Exporte_CHN_Others_quantities

23 . global xlist ln_GDP_CHN ln_GDP_others eu_ad us_ad

24 . describe $hs_group $t $ylist $xlist

              storage   display    value
variable name   type    format     label      variable label
------------------------------------------------------------------------------
hs_group        byte    %10.0g                hs_group
t               byte    %10.0g                trend
LN_Exporte_C~es float   %9.0g
ln_GDP_CHN      double  %10.0g                ln_GDP_CHN
ln_GDP_others   double  %10.0g                ln_GDP_others
eu_ad           byte    %10.0g                Dummy = 1 in Years of eu_ad_duties; =0 if not
us_ad           byte    %10.0g                Dummy = 1 in Years of us_ad_duties; =0 if not

25 . summarize $hs_group $t $ylist $xlist
```

Variable	Obs	Mean	Std. Dev.	Min	Max
hs_group	**150**	**8**	**4.334968**	**1**	**15**
t	**150**	**5.5**	**2.881904**	**1**	**10**
LN_Export~es	**120**	**15.36603**	**1.94221**	**11.70622**	**21.01127**
ln_GDP_CHN	**150**	**29.47431**	**.4532296**	**28.6434**	**30.03478**
ln_GDP_oth~s	**150**	**30.93717**	**.1806924**	**30.5929**	**31.12623**
eu_ad	**150**	**.16**	**.3678342**	**0**	**1**
us_ad	**150**	**.1066667**	**.3097231**	**0**	**1**

```
26 . sort $hs_group $t

27 . xtset $hs_group $t
       panel variable:  hs_group (strongly balanced)
        time variable:  t, 1 to 10
                delta:  1 unit

28 . xtdescribe

   hs_group:  1, 2, ..., 15                                    n =         15
          t:  1, 2, ..., 10                                    T =         10
              Delta(t) = 1 unit
              Span(t)  = 10 periods
              (hs_group*t uniquely identifies each observation)

   Distribution of T_i:   min      5%     25%       50%       75%     95%     max
                           10      10      10        10        10      10      10

        Freq.  Percent    Cum. |  Pattern
       ---------------------------+------------
          15    100.00  100.00 |  1111111111
       ---------------------------+------------
          15    100.00         |  XXXXXXXXXX

29 . xtsum $hs_group $t $ylist $xlist

   Variable         |      Mean   Std. Dev.       Min        Max |    Observations
   -----------------+--------------------------------------------+----------------
   hs_group overall |         8   4.334968          1         15 |     N =     150
            between |             4.472136          1         15 |     n =      15
            within  |                    0          8          8 |     T =      10
                    |                                            |
   t        overall |       5.5   2.881904          1         10 |     N =     150
            between |                    0        5.5        5.5 |     n =      15
            within  |             2.881904          1         10 |     T =      10
                    |                                            |
   LN_Ex~es overall |  15.36603    1.94221   11.70622   21.01127 |     N =     120
            between |             1.872527   12.59366   19.22633 |     n =      15
            within  |             .6959498   12.04993   17.21748 | T-bar =       8
                    |                                            |
   ln_GDP~N overall |  29.47431   .4532296    28.6434   30.03478 |     N =     150
            between |                    0   29.47431   29.47431 |     n =      15
            within  |             .4532296    28.6434   30.03478 |     T =      10
                    |                                            |
   ln_GDP~s overall |  30.93717   .1806924    30.5929   31.12623 |     N =     150
            between |             3.68e-15   30.93717   30.93717 |     n =      15
            within  |             .1806924    30.5929   31.12623 |     T =      10
                    |                                            |
   eu_ad    overall |       .16   .3678342          0          1 |     N =     150
            between |             .1549193          0         .3 |     n =      15
            within  |             .3357852       -.14        .86 |     T =      10
                    |                                            |
   us_ad    overall |  .1066667   .3097231          0          1 |     N =     150
            between |             .1830951          0         .4 |     n =      15
            within  |             .2538297  -.2933333   .7066667 |     T =      10

30 . reg $ylist $xlist t

         Source |       SS           df       MS      Number of obs   =       120
   -------------+----------------------------------   F(5, 114)       =     10.62
          Model |  142.604932         5  28.5209864   Prob > F        =    0.0000
       Residual |  306.284483       114  2.68670599   R-squared       =    0.3177
   -------------+----------------------------------   Adj R-squared   =    0.2878
          Total |  448.889415       119  3.77217995   Root MSE        =    1.6391
```

LN_Exporte~es	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
ln_GDP_CHN	-1.674137	4.521346	-0.37	0.712	-10.63089	7.282614
ln_GDP_others	2.768553	4.041889	0.68	0.495	-5.238398	10.7755
eu_ad	-1.121874	.5557064	-2.02	0.046	-2.222725	-.0210242
us_ad	4.197661	.6766753	6.20	0.000	2.857172	5.538149
t	.2414511	.5231362	0.46	0.645	-.7948777	1.27778
_cons	-22.34098	55.53691	-0.40	0.688	-132.3592	87.67722

31 . xtreg $ylist $xlist,re

Random-effects GLS regression — Number of obs = 120
Group variable: hs_group — Number of groups = 15

R-sq: — Obs per group:
within = 0.5113 — min = 4
between = 0.1942 — avg = 8.0
overall = 0.1271 — max = 10

Wald chi2(4) = 84.02
corr(u_i, X) = 0 (assumed) — Prob > chi2 = 0.0000

LN_Exporte~es	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
ln_GDP_CHN	.3460709	.3858896	0.90	0.370	-.4102589	1.102401
ln_GDP_others	1.591049	.9030809	1.76	0.078	-.1789566	3.361055
eu_ad	.2343351	.2317259	1.01	0.312	-.2198392	.6885095
us_ad	.5608736	.3065251	1.83	0.067	-.0399045	1.161652
_cons	-43.97392	17.95332	-2.45	0.014	-79.16178	-8.786056
sigma_u	.94871826					
sigma_e	.52613508					
rho	.76478734	(fraction of variance due to u_i)				

32 . xtreg $ylist $xlist t_square ,re

Random-effects GLS regression — Number of obs = 120
Group variable: hs_group — Number of groups = 15

R-sq: — Obs per group:
within = 0.5199 — min = 4
between = 0.1641 — avg = 8.0
overall = 0.1259 — max = 10

Wald chi2(5) = 86.64
corr(u_i, X) = 0 (assumed) — Prob > chi2 = 0.0000

LN_Exporte~es	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
ln_GDP_CHN	-.5271857	.8758086	-0.60	0.547	-2.243739	1.189368
ln_GDP_others	2.670825	1.322716	2.02	0.043	.0783499	5.2633
eu_ad	.1558946	.2410784	0.65	0.518	-.3166103	.6283995
us_ad	.5061365	.3064834	1.65	0.099	-.0945599	1.106833
t_square	.0078137	.0070417	1.11	0.267	-.0059877	.0216152
_cons	-51.92149	19.18041	-2.71	0.007	-89.5144	-14.32858
sigma_u	.97015898					
sigma_e	.52423909					
rho	.77399778	(fraction of variance due to u_i)				

```
33 . xtreg $ylist $xlist D07 D08 D09 D10 D11 D12 D13,re

Random-effects GLS regression                   Number of obs     =       120
Group variable: hs_group                        Number of groups  =        15

R-sq:                                           Obs per group:
     within  = 0.5529                                         min =         4
     between = 0.1692                                         avg =       8.0
     overall = 0.1296                                         max =        10

                                                Wald chi2(11)     =    102.94
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =    0.0000

------------------------------------------------------------------------------
LN_Exporte~es |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
   ln_GDP_CHN |   1.302601   .6676199     1.95   0.051      -.00591    2.611112
ln_GDP_others |   -1.25574   1.952378    -0.64   0.520     -5.08233     2.57085
        eu_ad |   .3057304   .2377388     1.29   0.198     -.160229    .7716899
        us_ad |   .5391477   .2957277     1.82   0.068     -.040468    1.118763
          D07 |   .1525077    .223224     0.68   0.494    -.2850034    .5900187
          D08 |   .1981517   .2537013     0.78   0.435    -.2990937     .695397
          D09 |  -.3400334   .1954911    -1.74   0.082     -.723189    .0431221
          D10 |   .3984444   .2729441     1.46   0.144    -.1365163     .933405
          D11 |   .4854171   .3782195     1.28   0.199    -.2558794    1.226714
          D12 |   .4118334   .3957115     1.04   0.298     -.363747    1.187414
          D13 |   .0907373   .2901601     0.31   0.754     -.477966    .6594406
        _cons |   15.75258   41.50326     0.38   0.704    -65.59232    97.09749
--------------+---------------------------------------------------------------
      sigma_u |     1.2122
      sigma_e |  .52274277
          rho |  .84319634   (fraction of variance due to u_i)
------------------------------------------------------------------------------

34 . xtreg d.($ylist $xlist D07 D08 D09 D10 D11 D12 ),re

Random-effects GLS regression                   Number of obs     =        90
Group variable: hs_group                        Number of groups  =        15

R-sq:                                           Obs per group:
     within  = 0.3654                                         min =         3
     between = 0.4821                                         avg =       6.0
     overall = 0.3585                                         max =         9

                                                Wald chi2(10)     =     44.15
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =    0.0000

------------------------------------------------------------------------------
D.
LN_Exporte~es |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
   ln_GDP_CHN |
          D1. |  -.1596797   4.444701    -0.04   0.971    -8.871134    8.551775
              |
ln_GDP_others |
          D1. |   .0145779   3.388328     0.00   0.997    -6.626423    6.655579
              |
        eu_ad |
          D1. |   .8738418   .4605766     1.90   0.058    -.0288717    1.776555
              |
        us_ad |
          D1. |   .3884885   .4605766     0.84   0.399     -.514225    1.291202
              |
          D07 |
          D1. |   .1134091   .2085881     0.54   0.587    -.2954161    .5222343
              |
          D08 |
          D1. |   .2400548   .3949256     0.61   0.543    -.5339851    1.014095
              |
          D09 |
          D1. |  -.2252877   .5056839    -0.45   0.656     -1.21641    .7658345
              |
          D10 |
```

D1.	.3571962	.2531334	1.41	0.158	-.1389361	.8533285
D11 D1.	.4110455	.2653221	1.55	0.121	-.1089763	.9310672
D12 D1.	.1922679	.1758363	1.09	0.274	-.1523649	.5369007
_cons	.1662152	.5409428	0.31	0.759	-.8940132	1.226444

sigma_u	0	
sigma_e	.44848255	
rho	0	(fraction of variance due to u_i)

```
35 . quietly xtreg $ylist $xlist, re

36 . xttest0

   Breusch and Pagan Lagrangian multiplier test for random effects

           LN_Exporte_CHN_Others_quantities[hs_group,t] = Xb + u[hs_group] + e[hs_group,t]

           Estimated results:
                                |       Var     sd = sqrt(Var)
                       ---------+------------------------------
                       LN_Exp~es |    3.77218        1.94221
                               e |    .2768181       .5261351
                               u |    .9000663       .9487183

           Test:   Var(u) = 0
                                       chibar2(01) =   198.80
                                   Prob > chibar2 =   0.0000

37 .
   end of do-file

38 .
```