sd(u_i + avg(e_i.))= **5.184962** Prob > F = **0.4971**

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      name:  <unnamed>
       log:  C:\Users\kbyjr\Desktop\Problem 10.smcl
  log type:  smcl
 opened on:  13 Feb 2013, 12:36:30
```

```
. reg y x d1 d2 d3
```

Source	SS	df	MS	Number of obs =	11
				F(4, 6) =	3.24
Model	1459.83563	4	364.958908	Prob > F =	0.0968
Residual	676.164368	6	112.694061	R-squared =	0.6834
				Adj R-squared =	0.4724
Total	2136	10	213.6	Root MSE =	10.616

y	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
x	2.075862	.6233781	3.33	0.016	.5505109	3.601213
d1	-8.257471	8.690108	-0.95	0.379	-29.5214	13.00646
d2	-13.18736	10.11803	-1.30	0.240	-37.94529	11.57058
d3	-5.873563	8.729766	-0.67	0.526	-27.23453	15.48741
_cons	13.70115	8.034352	1.71	0.139	-5.958202	33.3605

```
. xtgls y x, i(code)

Cross-sectional time-series FGLS regression

Coefficients:   generalized least squares
Panels:         homoskedastic
Correlation:    no autocorrelation

Estimated covariances      =           1          Number of obs      =          11
Estimated autocorrelations =           0          Number of groups   =           4
Estimated coefficients     =           2          Obs per group: min =           2
                                                                avg =        2.75
                                                                max =           3
                                                  Wald chi2(   1)     =       15.36
Log likelihood             =   -39.78067          Prob > chi2        =      0.0001
```

y	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
x	1.900053	.4848619	3.92	0.000	.9497408	2.850365
_cons	8.935918	4.916466	1.82	0.069	-.7001789	18.57201

```
. xtgls y x d1 d2 d3, i(code)

Cross-sectional time-series FGLS regression

Coefficients:   generalized least squares
Panels:         homoskedastic
Correlation:    no autocorrelation

Estimated covariances      =           1          Number of obs      =          11
Estimated autocorrelations =           0          Number of groups   =           4
Estimated coefficients     =           5          Obs per group: min =           2
                                                                avg =        2.75
                                                                max =           3
                                                  Wald chi2(   4)     =       23.75
Log likelihood             =    -38.2603          Prob > chi2        =      0.0001
```

y	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
x	**2.075862**	**.4603952**	**4.51**	**0.000**	**1.173504**	**2.97822**
d1	**-8.257471**	**6.41807**	**-1.29**	**0.198**	**-20.83666**	**4.321715**
d2	**-13.18736**	**7.472662**	**-1.76**	**0.078**	**-27.8335**	**1.458791**
d3	**-5.873563**	**6.44736**	**-0.91**	**0.362**	**-18.51016**	**6.76303**
_cons	**13.70115**	**5.933762**	**2.31**	**0.021**	**2.071189**	**25.33111**

```
. xtreg y x, fe i(code)

Fixed-effects (within) regression               Number of obs      =            11
Group variable:  code                             Number of groups   =             4

R-sq:  within  =  0.6489                          Obs per group: min =             2
       between =  0.2529                                         avg =           2.8
       overall =  0.5826                                         max =             3

                                                  F(1,6)             =         11.09
corr(u_i, Xb)  =  -0.2172                         Prob > F           =        0.0158
```

y	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
x	**2.075862**	**.6233781**	**3.33**	**0.016**	**.5505109**	**3.601213**
_cons	**7.44953**	**6.166182**	**1.21**	**0.272**	**-7.638574**	**22.53763**
sigma_u	**5.4777527**					
sigma_e	**10.615746**					
rho	**.21027196**	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(  3,  6) =     0.64                 Prob > F =  0.6182

. xtreg y x, be i(code)

Between regression (regression on group means)  Number of obs      =            11
Group variable:  code                             Number of groups   =             4

R-sq:  within  =  0.6489                          Obs per group: min =             2
       between =  0.2529                                         avg =           2.8
       overall =  0.5826                                         max =             3

                                                  F(1,2)             =          0.68
sd(u_i + avg(e_i.))=   5.184962                   Prob > F           =        0.4971
```

y	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
x	**.8608597**	**1.046335**	**0.82**	**0.497**	**-3.641156**	**5.362875**
_cons	**17.60407**	**9.599326**	**1.83**	**0.208**	**-23.69849**	**58.90664**

```
. xtreg y x, re i(code)

Random-effects GLS regression                   Number of obs      =            11
Group variable:  code                             Number of groups   =             4

R-sq:  within  =  0.6489                          Obs per group: min =             2
       between =  0.2529                                         avg =           2.8
       overall =  0.5826                                         max =             3

                                                  Wald chi2( 1)      =         12.56
corr(u_i, X)   =  0 (assumed)                     Prob > chi2        =        0.0004
```

y	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
x	**1.900053**	**.536035**	**3.54**	**0.000**	**.8494434**	**2.950662**
_cons	**8.935918**	**5.435358**	**1.64**	**0.100**	**-1.717188**	**19.58902**
sigma_u	**0**					
sigma_e	**10.615746**					
rho	**0**	(fraction of variance due to u_i)				

```
. log close
      name:  <unnamed>
       log:  C:\Users\kbyjr\Desktop\Problem 10.smcl
  log type:  smcl
 closed on:  13 Feb 2013, 12:36:44
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