

```
.
. *a
. xtset code year
```

Panel variable: code (unbalanced)

Time variable: year, 1960 to 2000, but with gaps

Delta: 1 unit

```
. *data set is unbalanced
```

```
. *b
```

```
. list dem_ind if country == "United States" & year==1965
```

```

+-----+
| dem_ind |
+-----+
1250. |      .92 |
+-----+
```

```
. * Answer .92
```

```
. list dem_ind if country == "Uruguay" & year==1965
```

```

+-----+
| dem_ind |
+-----+
1241. |        1 |
+-----+
```

```
. * Answer 1
```

```
. list dem_ind if country == "Trinidad and Tobago" & year==1995
```

```

+-----+
| dem_ind |
+-----+
1197. |        1 |
+-----+
```

```
. *Answer 1
. list dem_ind if country == "Venezuela, RB" & year==1995
```

```

+-----+
| dem_ind |
+-----+
1279. | .6666667 |
+-----+
```

```
. * Answer 0.667
.
. *C
. sum dem_ind, detail
```

dem_ind				
Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	1,266
25%	.1666667	0	Sum of wgt.	1,266
50%	.5		Mean	.4990732
		Largest	Std. dev.	.3713367
75%	.8333333	1		
90%	1	1	Variance	.137891
95%	1	1	Skewness	.0955317
99%	1	1	Kurtosis	1.479739

```
. * Average overall democracy index is 0.499. The minimum and maximum values of
> the index are 0 and 1
> respectively.
. * standard deviation is .3713367
. * 10th percentile 0
```

```
. * 25th- .1667
. * 50th- .5
. * 75th- .8333
. * 90th- 1
.
. *d
. xtset code year
```

Panel variable: code (unbalanced)
 Time variable: year, 1960 to 2000, but with gaps
 Delta: 1 unit

```
. reg dem_ind log_gdppc, vce (cluster country)
```

Linear regression	Number of obs	=	958
	F(1, 149)	=	396.40
	Prob > F	=	0.0000
	R-squared	=	0.4385
	Root MSE	=	.2719

(Std. err. adjusted for 150 clusters in country)

		Robust				
dem_ind	Coefficient	std. err.	t	P> t	[95% conf. interval]	
log_gdppc	.2356731	.011837	19.91	0.000	.212283	.2590632
_cons	-1.354828	.1004215	-13.49	0.000	-1.553262	-1.156394

```
.
. *e
. *The coefficient of log of gdp is .2356731 . Thus a 1% change in log_gdppc l
> eads to a 0.002356731 ch
> ange in dem_ind.
```

```

. *Yes it is significant as p value is less than level of significance and the
> 95% CI doesn't contain
> 0.
.
. *f
. *If log of per capita income increases by 20%, democracy index would increas
> e by 0.046. The confiden
> ce interval becomes [4.246,5.18]
.
. *g
. xtset code year

```

Panel variable: code (unbalanced)

Time variable: year, 1960 to 2000, but with gaps

Delta: 1 unit

```

. xtreg dem_ind log_gdppc, fe vce (cluster country)

```

```

Fixed-effects (within) regression      Number of obs   =      958
Group variable: code                  Number of groups =      150

```

```

R-sq:  Within = 0.0197                Obs per group: min =      1
      Between = 0.5365                  avg   =      6.4
      Overall = 0.4385                  max   =      9

```

```

                                F(1,149)      =      7.06
corr(u_i, Xb) = 0.6173          Prob > F      =      0.0088

```

(Std. err. adjusted for 150 clusters in country)

dem_ind	Coefficient	Robust std. err.	t	P> t	[95% conf. interval]	
log_gdppc	.083741	.0315258	2.66	0.009	.0214456	.1460364
_cons	-.115316	.257198	-0.45	0.655	-.6235425	.3929106
sigma_u	.26651952					
sigma_e	.20351058					
rho	.63168655	(fraction of variance due to u_i)				

```

.
. *h
. xtreg dem_ind log_gdppc i.year, fe vce (cluster country)

```

```

Fixed-effects (within) regression      Number of obs   =      958
Group variable: code                   Number of groups =      150

R-sq:  Within = 0.1182                  Obs per group:  min =       1
      Between = 0.3832                      avg =      6.4
      Overall  = 0.3190                      max =       9

                                         F(9,149)        =      5.65
corr(u_i, Xb) = 0.4393                  Prob > F         =      0.0000

```

(Std. err. adjusted for 150 clusters in country)

dem_ind	Coefficient	Robust std. err.	t	P> t	[95% conf. interval]	
log_gdppc	.0535878	.042432	1.26	0.209	-.0302585	.137434
year						
1965	.0002347	.0209199	0.01	0.991	-.0411033	.0415727
1970	-.1268076	.0340453	-3.72	0.000	-.1940816	-.0595337
1975	-.1477264	.0370153	-3.99	0.000	-.2208692	-.0745836
1980	-.097822	.0355399	-2.75	0.007	-.1680494	-.0275947
1985	-.0871025	.0391062	-2.23	0.027	-.1643769	-.009828
1990	-.0421216	.0353035	-1.19	0.235	-.1118818	.0276385
1995	.0095646	.0426094	0.22	0.823	-.0746322	.0937613
2000	.0323636	.0432037	0.75	0.455	-.0530075	.1177348
_cons	.1802954	.327202	0.55	0.582	-.4662601	.8268508
sigma_u	.28355993					
sigma_e	.19397224					
rho	.68122712	(fraction of variance due to u_i)				

