

Example 9-4

September 11, 2020

```
[ ]: # install the following packages and library
```

```
install.packages("pder")
```

```
install.packages("plm")
```

```
library("plm")
```

```
[2]: ##-----Block 1-----
```

```
#### Example 9-4 ####
```

```
## -----
```

```
data("LateBudgets", package = "pder")
```

```
# create 4 new variables that will be used
```

```
LateBudgets$dayslatepos <- pmax(LateBudgets$dayslate, 0)
```

```
LateBudgets$divgov <- with(LateBudgets,  
                           factor(splitbranch == "yes" |  
                                splitleg == "yes",  
                                labels = c("no", "yes")))
```

```
LateBudgets$unemprise <- pmax(LateBudgets$unempdiff, 0)
```

```
LateBudgets$unempfall <- - pmin(LateBudgets$unempdiff, 0)
```

```
# the model we'll estimate
```

```
form <- dayslatepos ~ unemprise + unempfall + divgov + elecyear +  
  pop + fulltimeleg + shutdown + censusresp + endbalance + kids +  
  elderly + demgov + lameduck + newgov + govexp + nocarry +  
  supmaj + black + graduate
```

```
## -----
```

```
# fixed effects tobit model
```

```
# pldv's default is to run a first-differenced model
```

```
FEtobit <- pldv(form, LateBudgets)
```

```
summary(FEtobit)
```

Oneway (individual) effect First-Difference Model

Call:

```
pldv(formula = form, data = LateBudgets)
```

Unbalanced Panel: n = 48, T = 2-20, N = 730

Observations used in estimation: 682

Residuals:

	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
	-107.59	-14.90	5.45	7.79	26.54	168.92

Coefficients:

	Estimate	Std. Error	t-value	Pr(> t)
(Intercept)	-0.28124	18.25711	-0.0154	0.98771
unemprise	9.04974	10.94530	0.8268	0.40864
unempfall	-31.63081	6.88996	-4.5909	5.273e-06 ***
divgovyes	19.89305	8.76504	2.2696	0.02355 *
elecyear	-24.64236	10.19018	-2.4182	0.01586 *
pop	0.63039	2.51571	0.2506	0.80221
endbalance	-3.85521	62.78238	-0.0614	0.95105
kids	0.78571	4.54604	0.1728	0.86283
elderly	60.66397	2.66761	22.7410	< 2.2e-16 ***
demgovyes	-6.33854	6.76914	-0.9364	0.34941
lameduckyes	-22.05156	4.05549	-5.4375	7.583e-08 ***
newgovyes	5.57770	10.53199	0.5296	0.59657
govexp	3.38177	38.93164	0.0869	0.93081

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Total Sum of Squares: 328270

Residual Sum of Squares: 998540

R-Squared: 0.025594

Adj. R-Squared: 0.0081157

F-statistic: 65.6237 on 12 and 669 DF, p-value: < 2.22e-16