Example 3-3

September 12, 2020

```
# install the following packages and libraries
install.packages("splm")
install.packages("pglm")
library("pglm")
```

[4]:
```
##--------------------------------Block 1--------------------------------

#### Example 3-3 ####

## ----------------------------------------------------------------------
data("RiceFarms", package = "splm")
Rice <- pdata.frame(RiceFarms, index = "id")

# pglm() estimates the maximum likelihood estimator
# by setting family = gaussian, we specify the distribution of errors is normal
rice.ml <- pglm(log(goutput) ~ log(seed) + log(totlabor) + log(size),
                data = Rice, family = gaussian)

## ----------------------------------------------------------------------
summary(rice.ml)
```

```
--------------------------------------------
Maximum Likelihood estimation
Newton-Raphson maximisation, 5 iterations
Return code 2: successive function values within tolerance limit
Log-Likelihood: -460.4513
6  free parameters
Estimates:
              Estimate Std. error t value  Pr(> t)
(Intercept)   5.312540   0.203771  26.071  < 2e-16 ***
log(seed)     0.219967   0.028330   7.764 8.21e-15 ***
log(totlabor) 0.285483   0.031047   9.195  < 2e-16 ***
log(size)     0.528012   0.032649  16.173  < 2e-16 ***
sd.id         0.119041   0.017129   6.950 3.66e-12 ***
sd.idios      0.363663   0.008601  42.282  < 2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
--------------------------------------------
```