Example 9-3

September 11, 2020

[ ]:
```
# install the following packages and libraries
install.packages("plm")
install.packages("pglm")

library("pglm")
library("plm")
library("survival")
library("maxLik")
library("texreg")
```

[2]:
```
# code to create a table for our results
extract.maxLik <- function (model, include.nobs = TRUE, ...){
    s <- summary(model, ...)
    names <- rownames(s$estimate)
    class(names) <- "character"
    co <- s$estimate[, 1]
    se <- s$estimate[, 2]
    pval <- s$estimate[, 4]
    class(co) <- class(se) <- class(pval) <- "numeric"
    n <- nrow(model$gradientObs)
    lik <- logLik(model)
    gof <- numeric()
    gof.names <- character()
    gof.decimal <- logical()
    gof <- c(gof, n, lik)
    gof.names <- c(gof.names, "Num. obs.", "Log Likelihood")
    gof.decimal <- c(gof.decimal, FALSE, TRUE)
    tr <- createTexreg(coef.names = names, coef = co, se = se, pvalues = pval,
                       gof.names = gof.names, gof = gof, gof.decimal = gof.
 ↪decimal)
    return(tr)
}
setMethod("extract", signature = className("maxLik", "maxLik"), definition =␣
 ↪extract.maxLik)
```

[3]:
```
##---------------------------------Block 1--------------------------------
```

```r
#### Example 9-3 ####

## ------------------------------------------------------------------------
data("MagazinePrices", package = "pder")

# simple logit model
logitS <- glm(change ~ length + cuminf + cumsales, data = MagazinePrices,
              subset = included == 1, family = binomial(link = 'logit'))

# fixed effects logit model
logitD <- glm(change ~ length + cuminf + cumsales + magazine,
              data = MagazinePrices,
              subset = included == 1, family = binomial(link = 'logit'))

# conditional logit model
logitC <- clogit(change ~ length + cuminf + cumsales + strata(id),
                 data = MagazinePrices,
                 subset = included == 1)

# print the results in a table
screenreg(list(logit = logitS, "FE logit" = logitD,
               "cond. logit" = logitC), omit.coef = "magazine")
```

'\n==\n logit FE logit cond. logit\n--\n(Intercept) -1.90 *** -1.18 ** \n (0.14) (0.42) \nlength -0.10 ** -0.07 * 1.02 ***\n (0.03) (0.03) (0.28) \ncuminf 6.93 *** 8.83 *** 19.20 * \n (1.12) (1.25) (7.51) \ncumsales -0.36 -1.14 7.60 * \n (0.98) (1.06) (3.46) \n--\nAIC 1008.90 1028.35 173.44 \nBIC 1028.63 1230.62 \nLog Likelihood -500.45 -473.18 \nDeviance 1000.90 946.35 \nNum. obs. 1026 1026 1026 \nR^2 0.20 \nMax. R^2 0.32 \nNum. events 213 \nMissings 0 \n==\n*** p < 0.001; ** p < 0.01; * p < 0.05\n'