

Microeconometrics

Wei-heng Zhang

2022-04-21

```
library(FinMetric)

## Loading required package: zoo
##
## Attaching package: 'zoo'
## The following objects are masked from 'package:base':
##
##   as.Date, as.Date.numeric
## Warning: replacing previous import 'lifecycle::last_warnings' by
## 'rlang::last_warnings' when loading 'pillar'
## Warning: replacing previous import 'lifecycle::last_warnings' by
## 'rlang::last_warnings' when loading 'tibble'
## Warning: replacing previous import 'lifecycle::last_warnings' by
## 'rlang::last_warnings' when loading 'hms'
##
## Please cite as:
## Hlavac, Marek (2018). stargazer: Well-Formatted Regression and Summary Statistics Tables.
## R package version 5.2.2. https://CRAN.R-project.org/package=stargazer
```

Censored Data

$$DGP : y_i^* = a + bx_i + v_i$$
$$y_i = \begin{cases} y_i^* & \text{if } y_i^* > 0 \\ 0 & \text{if } y_i^* \leq 0 \end{cases}$$

```
set.seed(1)
N <- 500
a <- 2
b <- 3
x <- runif(N)
u <- rnorm(N)
y_star <- a + b*x + u
y <- ifelse(y_star > 0, y_star, 0)
lm1 <- lm(y ~ x)
coefTest(lm1, vcov = vcovHC, type = "HC1")
```

```
##
## t test of coefficients:
```

```
##
##           Estimate Std. Error t value Pr(>|t|)
## (Intercept) 2.010823   0.094962  21.175 < 2.2e-16 ***
## x           2.911883   0.167321  17.403 < 2.2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```