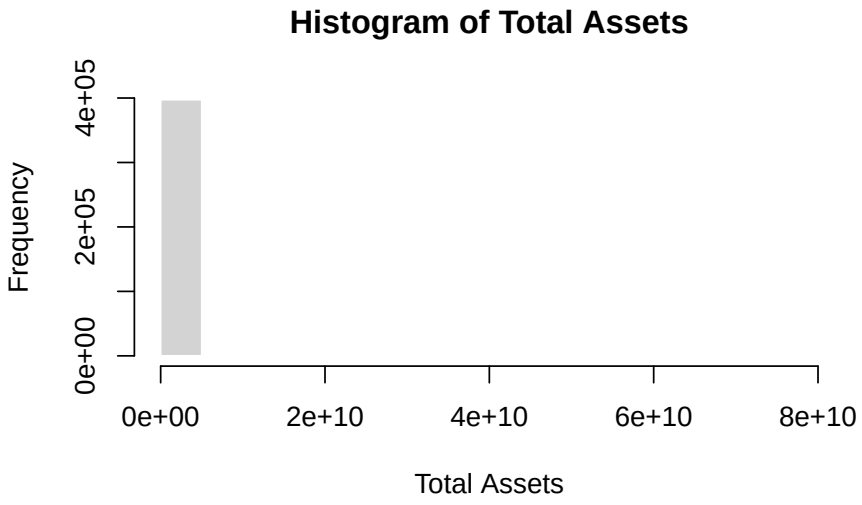
step5_analysis.qmd

Step5_analysis

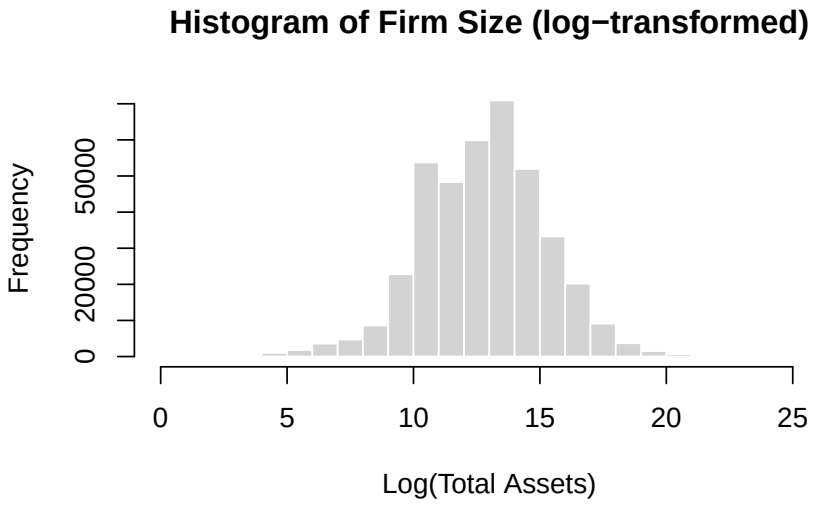
```
options(warn = -1)
library(psych)
library(dplyr)
library(knitr)
library(kableExtra)
```

```
data <- readRDS("~/Desktop/second semester /research on transparency/rct25-main/data/generat
View(data)
```

```
# seriously skewed firm size
hist(data$toas,
     main = "Histogram of Total Assets",
     xlab = "Total Assets",
     ylab = "Frequency",
     col = "lightgray",
     border = "white")
```




```
hist(log(data$toas),
     main = "Histogram of Firm Size (log-transformed)",
     xlab = "Log(Total Assets)",
     ylab = "Frequency",
     col = "lightgray",
     border = "white")
```



The `echo: false` option disables the printing of code (only output is displayed).

```r
# construct equity ratio and binary postcode variable and log transformed toas
data$log_toas <- log(data$toas)
data$EquityRatio <- data$shfd / data$toas
data$postcode_13353 <- ifelse(data$postcode == 13353, 1, 0)
```

```r
library(ggplot2)
library(tidyr)
quantile(data$EquityRatio, probs = c(0.01, 0.99), na.rm = TRUE)
```

```
       1%       99%
-30.77079   1.00000
```

```r
# descriptive
library(psych)
describe(data[, c("EquityRatio", "log_toas", "postcode_13353")])
```

```
               vars      n   mean       sd median trimmed  mad       min   max
EquityRatio       1 397586 -60.79 16471.26   0.32    0.33 0.48 -10004499 17.90
log_toas          2 397594  12.77     2.52  12.91   12.79 2.45         0 25.06
postcode_13353    3 394892   0.00     0.06   0.00    0.00 0.00         0  1.00
                    range    skew  kurtosis    se
EquityRatio    10004516.90 -570.37 343098.81 26.12
log_toas             25.06   -0.24      1.23  0.00
postcode_13353        1.00   15.57    240.43  0.00
```

```r
library(datawizard)
# Winsorize EquityRatio1 at 1% and 99%
data$EquityRatio_wins <- winsorize(
  data$EquityRatio,
  threshold = 0.01,
  method = "percentile")
```

```r
#fixed time effect regression
library(fixest)
# log(toatl assets)
model_toas <- feols(
  log_toas ~ postcode_13353 | year,
  data = data,
  cluster = ~postcode_13353
)
#euity ratio comparison
model_equity <- feols(
  EquityRatio_wins ~ postcode_13353 | year ,
```

Table 1: Comparison of Firms in 13353 vs. Berlin Population

	log(Total Assets)	Equity Ratio
postcode_13353	−0.313**	0.002
	(0.004)	(0.001)
Num.Obs.	394 892	394 884
R2	0.118	0.008
R2 Adj.	0.118	0.008
R2 Within	0.000	0.000
R2 Within Adj.	0.000	0.000
RMSE	2.37	3.71
Std.Errors	by: postcode_13353	by: postcode_13353
Fixed Time Effects	Year	Year

+ p <0.1, * p <0.05, ** p <0.01, *** p <0.001

```
  data = data,
  cluster = ~postcode_13353
)
```

```
library(modelsummary)
modelsummary(
  list("log(Total Assets)" = model_toas,
       "Equity Ratio" = model_equity),
  stars = TRUE,
  statistic = "({std.error})",
  gof_omit = "AIC|BIC|Log.Lik|Adj.R2|FE",
  output = "latex",
  title = "Comparison of Firms in 13353 vs. Berlin Population",
  add_rows = tibble::tibble(
    term = "Fixed Time Effects",
    `log(Total Assets)` = "Year",
    `Equity Ratio` = "Year"
  )
)
```