TWFE Sensitivity Analysis

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SCENARIO: for_profit_only

SAMPLE: with_anticipation

```
[info] rows=463,563 | CCNs=6016
```

OUTCOME: total_hppd (level)

```
OLS estimation, Dep. Var.: total_hppd
Observations: 463,561
Fixed-effects: cms_certification_number: 6,014,  year_month: 90
Standard-errors: Clustered (cms_certification_number & year_month)
              Estimate Std. Error t value          Pr(>|t|)
post          -0.077891   0.014135   -5.51 0.000000344208485646 ***
chain         -0.053508   0.012723   -4.21 0.000061893634662317 ***
beds          -0.002374   0.000631   -3.76 0.000300069906668177 ***
occupancy_rate -0.009235  0.000531  -17.38          < 2.2e-16 ***
pct_medicare   0.004132   0.000759    5.44 0.000000459975210591 ***
pct_medicaid  -0.000909   0.000250   -3.64 0.000464768863715718 ***
cm_q_state_2   0.015778   0.005257    3.00 0.003485536880072840 **
cm_q_state_3   0.043187   0.006713    6.43 0.000000006099095762 ***
cm_q_state_4   0.080108   0.008741    9.16 0.000000000000017135 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.427727     Adj. R2: 0.692246
                Within R2: 0.032852
```

OUTCOME: total_hppd (log)

```
OLS estimation, Dep. Var.: ln_total
Observations: 463,561
Fixed-effects: cms_certification_number: 6,014,  year_month: 90
Standard-errors: Clustered (cms_certification_number & year_month)
              Estimate Std. Error t value         Pr(>|t|)
post          -0.023688   0.004572   -5.18 0.00000136112901916 ***
```

```
chain          -0.013298   0.004174    -3.19 0.00199011407461126 **
beds           -0.000589   0.000188    -3.14 0.00232219062358180 **
occupancy_rate -0.002422   0.000138   -17.51            < 2.2e-16 ***
pct_medicare    0.000873   0.000218     4.01 0.00012710370675818 ***
pct_medicaid   -0.000288   0.000080    -3.59 0.00053501532287477 ***
cm_q_state_2    0.008274   0.001709     4.84 0.00000537768145687 ***
cm_q_state_3    0.018596   0.002161     8.60 0.00000000000024757 ***
cm_q_state_4    0.028927   0.002773    10.43            < 2.2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.140636    Adj. R2: 0.654866
                 Within R2: 0.021949
```

SAMPLE: without_anticipation

```
[info] rows=459,792 | CCNs=6005
```

OUTCOME: total_hppd (level)

```
OLS estimation, Dep. Var.: total_hppd
Observations: 459,787
Fixed-effects: cms_certification_number: 6,000,  year_month: 90
Standard-errors: Clustered (cms_certification_number & year_month)
              Estimate Std. Error t value          Pr(>|t|)
post          -0.081698   0.014726    -5.55 0.000000293872004462 ***
chain         -0.054206   0.012879    -4.21 0.000061150408037800 ***
beds          -0.002382   0.000634    -3.76 0.0003042720194206014 ***
occupancy_rate -0.009295   0.000535   -17.38            < 2.2e-16 ***
pct_medicare   0.004192   0.000762     5.50 0.000000356486132339 ***
pct_medicaid  -0.000897   0.000250    -3.59 0.000544129415786196 ***
cm_q_state_2   0.015479   0.005236     2.96 0.003988565232164907 **
cm_q_state_3   0.043197   0.006683     6.46 0.000000005321672514 ***
cm_q_state_4   0.079920   0.008742     9.14 0.000000000000019108 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.427384    Adj. R2: 0.693043
                 Within R2: 0.033121
```

OUTCOME: total_hppd (log)

```
OLS estimation, Dep. Var.: ln_total
Observations: 459,787
Fixed-effects: cms_certification_number: 6,000,  year_month: 90
Standard-errors: Clustered (cms_certification_number & year_month)
              Estimate Std. Error t value          Pr(>|t|)
post          -0.025197   0.004748    -5.31 0.00000081098910951 ***
```

```
chain           -0.013264   0.004207    -3.15 0.00220403513171102 **
beds            -0.000592   0.000189    -3.13 0.00236018227543271 **
occupancy_rate  -0.002436   0.000139   -17.57           < 2.2e-16 ***
pct_medicare     0.000893   0.000218     4.09 0.00009535911091285 ***
pct_medicaid    -0.000284   0.000080    -3.55 0.00062783093465642 ***
cm_q_state_2     0.008135   0.001701     4.78 0.00000680948142041 ***
cm_q_state_3     0.018618   0.002157     8.63 0.00000000000021586 ***
cm_q_state_4     0.028845   0.002781    10.37           < 2.2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.139947    Adj. R2: 0.657413
               Within R2: 0.02231
```

SCENARIO: non_profit_only

SAMPLE: with_anticipation

```
[info] rows=108,675 | CCNs=1497
```

OUTCOME: total_hppd (level)

```
OLS estimation, Dep. Var.: total_hppd
Observations: 108,672
Fixed-effects: cms_certification_number: 1,494,  year_month: 90
Standard-errors: Clustered (cms_certification_number & year_month)
               Estimate Std. Error t value          Pr(>|t|)
post           -0.072069   0.070025   -1.029 0.30617817230527422
chain          -0.092627   0.046010   -2.013 0.04711452524231818 *
beds           -0.002195   0.000883   -2.486 0.01477648475752662 *
occupancy_rate -0.007808   0.000896   -8.711 0.00000000000014919 ***
pct_medicare    0.006626   0.001944    3.410 0.00097983097109481 ***
pct_medicaid   -0.000163   0.000773   -0.210 0.83378888825942399
cm_q_state_2    0.008211   0.011167    0.735 0.46408790920578025
cm_q_state_3    0.047497   0.014093    3.370 0.00111202974054981 **
cm_q_state_4    0.086737   0.018294    4.741 0.00000801558150669 ***
... 1 variable was removed because of collinearity (non_profit)
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.501688    Adj. R2: 0.682813
               Within R2: 0.024667
```

OUTCOME: total_hppd (log)

```
OLS estimation, Dep. Var.: ln_total
Observations: 108,672
Fixed-effects: cms_certification_number: 1,494,  year_month: 90
```

```
Standard-errors: Clustered (cms_certification_number & year_month)
               Estimate Std. Error t value        Pr(>|t|)
post           -0.020357   0.021889  -0.930 0.354887267503482
chain          -0.017223   0.011324  -1.521 0.131821684518162
beds           -0.000473   0.000216  -2.187 0.031363302873313 *
occupancy_rate -0.001692   0.000216  -7.817 0.000000000010311 ***
pct_medicare    0.001665   0.000485   3.429 0.000918392988690 ***
pct_medicaid   -0.000102   0.000203  -0.504 0.615397852512036
cm_q_state_2    0.004345   0.003079   1.411 0.161701244465892
cm_q_state_3    0.016329   0.004092   3.991 0.000135073799148 ***
cm_q_state_4    0.026897   0.005194   5.178 0.000001379922344 ***
... 1 variable was removed because of collinearity (non_profit)
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.140936     Adj. R2: 0.652799
                 Within R2: 0.017186
```

SAMPLE: without_anticipation

```
[info] rows=108,300 | CCNs=1497
```

OUTCOME: total_hppd (level)

```
OLS estimation, Dep. Var.: total_hppd
Observations: 108,297
Fixed-effects: cms_certification_number: 1,494,  year_month: 90
Standard-errors: Clustered (cms_certification_number & year_month)
               Estimate Std. Error t value        Pr(>|t|)
post           -0.080095   0.069807  -1.147 0.25429872723626673
chain          -0.092083   0.045993  -2.002 0.04831548581212705 *
beds           -0.002197   0.000884  -2.487 0.01475383760630889 *
occupancy_rate -0.007792   0.000896  -8.692 0.00000000000016281 ***
pct_medicare    0.006731   0.001949   3.454 0.00084751824056727 ***
pct_medicaid   -0.000176   0.000775  -0.227 0.82071213710686264
cm_q_state_2    0.007987   0.011175   0.715 0.47667174267334766
cm_q_state_3    0.047149   0.014060   3.353 0.00117403962376211 **
cm_q_state_4    0.086517   0.018260   4.738 0.00000812014651401 ***
... 1 variable was removed because of collinearity (non_profit)
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.501798     Adj. R2: 0.683031
                 Within R2: 0.024692
```

OUTCOME: total_hppd (log)

```
OLS estimation, Dep. Var.: ln_total
```

```
Observations: 108,297
Fixed-effects: cms_certification_number: 1,494,  year_month: 90
Standard-errors: Clustered (cms_certification_number & year_month)
               Estimate Std. Error t value      Pr(>|t|)
post           -0.022334   0.021953   -1.017 0.311725092872904
chain          -0.017059   0.011306   -1.509 0.134875912274984
beds           -0.000474   0.000217   -2.189 0.031201534107319 *
occupancy_rate -0.001688   0.000217   -7.787 0.000000000011853 ***
pct_medicare    0.001697   0.000487    3.485 0.000767013989145 ***
pct_medicaid   -0.000106   0.000204   -0.521 0.603466183296328
cm_q_state_2    0.004267   0.003084    1.384 0.169890268458359
cm_q_state_3    0.016192   0.004083    3.965 0.000147822934353 ***
cm_q_state_4    0.026821   0.005190    5.168 0.000001441184623 ***
... 1 variable was removed because of collinearity (non_profit)
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.14096     Adj. R2: 0.652978
                Within R2: 0.017251
```

Done.