Instruction for Replicating “Using Bid Rotation and Incumbency to Detect

Collusion: A Regression Discontinuity Approach”

**Data Availability**

Data on Ohio school milk are obtained from the following paper:

Wachs, Johannes and Jnos Kertsz, A network approach to cartel detection in public auction markets, Scientific Reports 9, Article number 10818 (2019). The data can be accessed at at: <https://www.dropbox.com/sh/dy09lkchxph8up1/AAAGObh3jxkra7e_rWlwwgefa?dl=0>.

Data on municipal auctions from Japan were obtained through FOIA requests to municipal offices.

All output are produced under the folder Replication/Output

Codes are contained under the folder Replication/Codes

Ado folder contains ado files needed to replicate results.

Data files are contained either under the folder Replication/Data/Ohio (for the Ohio school milk auctions data) or Replication/Data/Tohoku (for the Japanese municipalities auctions)

Table 1, Table 2, Figure 2: run summary\_stats\_ohio\_milk.do

Table 3 & Figure 3: run rdanalysis\_ohio\_milk.do

Note 1: rdanalysis\_ohio\_milk.do depends on rdplot\_ohio.do

Note 2: Results slightly differ depending on the version of rdrobust you use. For the paper’s results, use rdrobust in ado file contained in the replication folder.

Note 3: For Table 3, we report the bias-corrected estimates + standard errors. These are the numbers that appear after **di `estimate'** and **di `std'**

Table 4, Table B4, Figure 4, Figure B6: run summary\_stats\_japan.do

Table 5, Table 6, Table 7, Table B1, Table B2, Table B3, Table B5, Figure 1, Figure 5, Figure 6, Figure 7, Figure 8, Figure B1, Figure B2, Figure B3, Figure B4, Figure B5: run analysis\_japan.do

Note 1: analysis\_japan,do depends on rdprogram\_nopartition.do, rdprogram\_exactly\_legal.do, constructiontype\_name.do, rollingbacklog.do

Note 2: For RDD results, we report the bias-corrected estimates + standard errors. These are the numbers that appear after **di `estimate'** and **di `std'**

**Main Text**

|  |  |  |
| --- | --- | --- |
|  | code | latex |
| Figure 1 | analysis\_japan.do | Exactmotivating\_figure.png |
| Figure 2 | summary\_stats\_ohio\_milk.do | ohio\_ohio.png |
| Figure 3 | rdanalysis\_ohio\_milk.do | Ohiordplot.png |
| Figure 4 | summary\_stats\_japan.do | hist\_base.png |
| Figure 5 | analysis\_japan.do | nopartitionbase\_util\_1.png |
| Figure 6 | analysis\_japan.do | sanopartitionbase\_incumbent\_1.png |
| Figure 7 | analysis\_japan.do | Exactbase\_utilnm\_delta1.png |
| Figure 8 | analysis\_japan.do | saExactbase\_Incumbent\_1.png |
| Table 1 | summary\_stats\_ohio\_milk.do | Ohio\_summary.tex |
| Table 2 | summary\_stats\_ohio\_milk.do | Ohio\_incumbent.tex |
| Table 3 | rdanalysis\_ohio\_milk.do | Ohio\_results.tex |
| Table 4 | summary\_stats\_japan.do | municipal\_summary.tex |
| Table 5 | summary\_stats\_japan.do | municipal\_joint2.tex |
| Table 6 | summary\_stats\_japan.do | exactmunicipal\_results2.tex |
| Table 7 | summary\_stats\_japan.do | exactmunicipal\_placebo.tex |

**Online Appendix**

|  |  |  |
| --- | --- | --- |
|  | Code | latex |
| Figure B1 | analysis\_japan.do | nopartitionbase\_blog\_1.png |
| Figure B2 | analysis\_japan.do | Exactbase\_blog\_delta1.png |
| Figure B3 | analysis\_japan.do | Exactbase\_utilnm\_delta2.png |
| Figure B4 | analysis\_japan.do | Exactbase\_blog\_delta2.png |
| Figure B5 | analysis\_japan.do | saExactbase\_Incumbent\_2.png |
| Table B1 | analysis\_japan.do | municipal\_results.tex |
| Table B2 | analysis\_japan.do | rolling\_backlog.tex |
| Table B3 | analysis\_japan.do | exactmunicipal\_public.tex |
| Table B4 | summary\_stats\_japan.do | municipal\_all\_summary.tex |
| Table B5 | analysis\_japan.do | exactmunicipal\_all\_results.tex |

**References**

**Wachs, Johannes and Jnos Kertsz. 2019**. "Replication data for: A network approach to cartel detection in public auction markets, Scientific Reports 9, Article number 10818.” <https://www.dropbox.com/sh/dy09lkchxph8up1/AAAGObh3jxkra7e_rWlwwgefa?dl=0>.

**Kawai, Kei, Jun Nakabayashi, Juan Ortner, and Sylavain Chassang. 2022.** "Replication data for: Using bid rotation and incumbency to detect collusion: a regression discontinuity approach”

<https://zenodo.org/record/5797532#.Ye3oIPiIa3A>