Marek Chadim – Markups and Public Procurement

Data Appendix and Code Documentation

Young Economist of the Year Award, The Czech Economic Society

Data Appendix

In this note, I describe the firm-level data used in more detail. The financial statements are taken from the MagnusWeb database and consist of company accounts of firms operating in the Czech construction sector between 2005 and 2021. The data on government tenders are available from 2006 onward and originate from the Czech IT company Datlab s.r.o. Related work using the same procurement data includes Baranek and Titl (2020). The estimation dataset contains information on 1,521 firms and forms an unbalanced panel with information on public procurement entry, exit, and status. The latter provides information, at every point in time, on whether a firm operates exclusively in the private market, begins receiving sales from procurement, or is a continuing government contractor. Considering only observations for which markups are estimated (i.e., the first lag of data exists), the sample consists of 1,297 firms and 7,261 observations over the period 2006–2021. The CZ-NACE F industry code classifies the construction sector into Construction of buildings (41), Civil engineering (42), and Specialized construction activities (43).

All monetary variables are deflated using the appropriate industry deflators. The variables used in the analysis are:

- **Sales**: Total operating revenue,
- **Capital**: Total fixed assets in book value,
- **Costs of goods sold**, and
- **Procurement status** at each point in time.

The firm-level dataset also contains information on institutional sector and ownership. In the sample, around 92 percent of firms (592 firms in 2021) are privately owned, and half of them are government contractors (301 firms in 2021).

Any comments or questions are welcome. Please send them to `chadimarek@gmail.com`.

Markups Folder

Reference: De Loecker, Jan, Jan Eeckhout, and Gabriel Unger (2020). *"The Rise of Market Power and the Macroeconomic Implications."* The Quarterly Journal of Economics.

1. **Code**: The master file `make_paper.do` executes:
   - `Create_Data.do`: reads in the data,
   - `Create_Temp.do`: creates a temporary file for analysis,
   - `Create_Output.do`: produces figures.
2. **Data**: contains external datasets:
   - MagnusWeb data (Czech construction sector),
   - OECD deflators for the Czech Republic,
   - Czech public procurement tender data,
   - Directory `\PF` containing output elasticity and markup estimates under the firm-year Translog specification.
3. **Output**: empty folder with subdirectory `\figures` for storing output.
4. **Temp**: folder used for temporarily storing intermediate files (automatically deleted at the end of the master file).

Procurement Folder

Reference: De Loecker, Jan, and Frederic Warzynski (2012). *"Markups and Firm-Level Export Status."* The American Economic Review.

The code is provided in `DLW_mastercode.do`. This file produces all tables and results presented in the final version of the paper. It generates the estimated markups using the recommended procedure, which is called from `DLW_procedure.do`. The code is written in Stata.

Although several publicly available programs now exist for estimating production functions (e.g., `levpet` and the Wooldridge version using `ivreg2` in Stata), the DLW approach extends beyond the Cobb–Douglas specification. Even compared with the more flexible production function estimator `prodest` in Stata, several methodological details differ. In particular, the DLW procedure requires an estimate of the first-stage error term to purge revenue shares of this variation.