

Readme file for WB replication package

Procuring Low Growth: The Impact of Political Favoritism on Public Procurement and Firm Performance in Bulgaria

This repository contains the replication materials (datasets and scripts).

Data Availability Statement

This paper uses Orbis firm-level data which are commercial datasets. Orbis firm-level data can be accessed through a subscription to the [Orbis](#) database, provided by Bureau van Dijk, a Moody's Analytics company. Access typically requires institutional or individual licensing, and users can retrieve detailed firm-level information such as financials, ownership structures, and industry classifications. Researchers or organizations can access Orbis via its web-based interface or through API integration for advanced data retrieval. Academic institutions often provide access to Orbis for faculty and students, subject to the terms of their institutional agreements.

This paper has been initiated as a background research paper for the [Bulgaria CEM 2022: A Path to High Income](#), whereby the unit (EP-ECA) of the World Bank author (Marc Schiffbauer) did not have a subscription to Orbis. The raw Orbis data for Bulgaria were files were therefore provided by the FCI global (Markets) team on April 3, 2022. Specifically, the global market team shared the complete raw ownership and financial data for all companies for each year from 2010 to 2018 in the datafiles labelled "datawithlinks_year.dta" with the Bulgaria CEM 2022 team. Given the large size of the data, the complete raw ownership and financial data were shared separately for each year.

Datasets

The replication package contains the 9 raw Orbis Stata dataset "datawithlinks_2010.dta", "datawithlinks_2011.dta", ..., "datawithlinks_2018.dta". Each dataset contains the complete raw ownership and financial data for the corresponding year.

The attached Stata code "Procuring misallocation WBPR replication.do" starts by reading in the raw data to construct a raw Orbis dataset for all years from 2010-2018.

The Orbis data are confidential and have been provided by the World Bank global team:

- Original source: <https://login.bvdinfo.com/Orbis>

- Description: Raw Orbis database with a separate file for each year; each year file includes firms' company characteristics, financials, and ownership information.
- Accessed: April 2022.
- Availability: Not publicly available.

The code further reads in the following additional data as follows:

1. Public procurement micro-level data:

“pp_panel_supplier_year_2011_2019_all.csv”: contains the unique national company IDs of all firms that have been awarded with a public procurement contract between 2010 and 2018 (notably, the company ID variable “bvdidnumber” in Orbis provides the same national tax IDs only with “BG” add before the unique ID). It further provides for each firm the value of the contract (“contractvalue”), and average corruption risk indicators (cri_mean) for all contracts obtained by each firm in the specific year.

“pp_relprice”: contains the variable relprice which is the relative price calculated as contract value divided by originally estimated lot price, grouped and averaged by company-year.

The public procurement data stem from the administrative register and covers nearly the whole economy. These data include contracts and tenders sourced from the two national e-procurement portals.¹

This is the original source datasets for Bulgarian public procurement.

- Original source: <https://app.eop.bg/today>.
- Description: A newer source of Bulgarian public procurement data updated in 2020. Scraped by [Datlab](<https://datlab.eu/>), annotated and validated by GTI.
- Accessed: March 2022.
- Availability: Not publicly available.

¹ <http://www.aop.bg> and <https://app.eop.bg>

2. Dummy for political connected firms:

The [Center for the Study of Democracy](https://csd.eu/) (CSD) in Sofia (<https://csd.eu/>) has constructed a list of politically connected firms for the [Bulgaria CEM 2022: A Path to High Income](#), whereby politically connected firms are defined as firms that have been (co-)owned or managed by a politically exposed persons. The CSD provided the World bank with a list of politically connected firms identified in the Orbis data in the file “PC firms 2010-2021.dta”. Those have been identified using asset declarations of politically exposed persons and firms’ tax IDs (reported in Orbis). Notably, the company ID variable “bvdidnumber” in Orbis provides the national tax IDs only with “BG” add before the unique ID.

The CSD and the World Bank team define Politically Connected (PC) firms as firms that are owned or managed by a politically exposed person, identified through asset declarations (see details in the paper). The Orbis firm IDs were merged with the Bulgarian firm names by the Center for the Study of Democracy.

The following dummy variables were provided by firm ID in the file "PC firms 2010-2021.dta":

- pc_all: dummy = 1 for any type of political connections, starting from year of first political position of related PEP.
- pc_tier1: with high political positions only in National Government Executive, Legislative, or Judiciary only.
- pc_exe_all: executive: implementing the laws including Ministers, deputy/minister, Secretary General, Commissioner, Head of Department.
- pc_legal_all: drafting the laws: Members of Parliament.
- pc_lg_all: leading position in local government including deputy/district governor, deputy/mayor, chief architect, municipal councilor.
- gen pc_soe: regulator in gov agency such as competition agency: deputy/director, member of governing board of SOE. */

The dataset of politically connected firms provided confidentially by the CSD includes:

- Original source: <https://csd.eu/>
- Description: Raw database with firm IDs and dummy for politically connected firms.
- Accessed: April 2022.
- Availability: Not publicly available.

Scripts

The replication package contains the Stata do-file “Procuring misallocation WBPR replication.do”. The do-file starts from the confidential raw Orbis datafiles and reads in the additional confidential public procurement and political connection data. The file start from the raw Orbis database for each year including firms’ company characteristics, financials, and ownership information. It first assembles a Stata database including all firms, variables and years from the raw files. The code then defines all the variables used in the estimations and produces all tables in the paper; that is, Tables 1-6 and Table A.1. The do-file is organized by Table with clear heading for each table followed by the code to run to produce that table. Table A.2 and Figure A.1 are taken from the following published study (Table 1 on page 6 and Figure 2 on page 9).

Fazekas, Poltoratskaia, and Tóth (2023): “Corruption Risks and State Capture in Bulgarian Public Procurement”, Policy Research Working Paper: WPS 10444 Washington, D.C.: The World Bank.