README for Replication Package

Impacts of ownership changes on emissions and industrial production: Evidence from Europe

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Content of replication package:

1. Data sources: ME-FINE dataset
2. Overview of files
3. Step-by-step instructions for replication
4. List of output files
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1. Data sources

The analysis is based on the ME-FINE dataset, a merge of the Orbis database and the European Pollutant Release and Transfer Registry (E-PRTR). A detailed prediction is provided in Germeshausen et al. 2022.

The BVDIDs merged to the E-PRTR data can be accessed at the ZEW RDC on site. More information on the data acquisition procedures at ZEW-RDC can be found here. Own access to the Orbis database is required.

2. Overview of files

The analysis includes the facility, firm and parent company level.

Facilities

- facilities_01.R: Prepares facility data for analysis and creates descriptive statistics
- facilities_02.R: Conducts the main analysis and runs robustness checks

Firms

- firms_01.R: Prepares firm data for analysis and creates descriptive statistics
- firms_02.R: Conducts the main analysis and runs robustness checks

Parent companies

- parent_companies_01.R: Prepares data for analysis and conducts the analysis for acquiring parent companies
- parent_companies_02.R: Prepares data for analysis and conducts the analysis on other facilities of acquiring parent companies

3. Step-by-step instructions for replication

1. Set working directory

Open each R script and set the working directory at the top of each script

2. Set output directory

In each R script, set output directories in functions for analysis

3. Run analysis

4. List of output files

Figure1: Empirical strategy (produced by facilities_01.R)

Figure2: Results (produced by facilities_02.R)

Figure3a: Results (produced by facilities_02.R)

Figure3b: Results (produced by facilities_02.R)

Figure4: Results (produced by firms_02.R)

Figure5a: Results (produced by firms_02.R)

Figure5b: Results (produced by firms_02.R)

Figure6: Results (produced by parent_companies_01.R)

Figure7: Results (produced by parent_companies_01.R)

Figure8: Results (produced by parent_companies_02.R)

Figure9: Results (produced by firms_02.R)

Figure10: Results (produced by firms_02.R)

Figure11: Results (produced by parent_companies_02.R)

Figure B1a: Appendix B (produced by firms_01.R)

Figure B1b: Appendix B (produced by firms_01.R)

Figure B2a: Appendix B (produced by firms_01.R)

Figure B2b: Appendix B (produced by firms_01.R)

Figure B3a: Appendix B (produced by firms_01.R)

Figure B3b: Appendix B (produced by firms_01.R)

Figure B4: Appendix B (produced by .R)

Figure B5: Appendix B (produced by firms_01.R)

Figure B6: Appendix B (produced by firms_01.R)

Figure B7: Appendix B (produced by facilities_02.R)

Figure B8: Appendix B (produced by facilities_02.R)

Figure B9: Appendix B (produced by firms_02.R)

Figure B10: Appendix B (produced by firms_02.R)

Figure B11: Appendix B (produced by parent_companies_01.R)

Figure B12: Appendix B (produced by parent_companies_01.R)

Figure B13a: Appendix B (produced by firms_02.R)

Figure B13b: Appendix B (produced by firms_02.R)

Figure B14: Appendix B (produced by parent_companies_01.R)

Figure B15: Appendix B (produced by parent_companies_01.R)

Figure B16: Appendix B (produced by parent_companies_01.R)

Figure B17: Appendix B (produced by parent_companies_01.R)

Figure B18: Appendix B (produced by parent_companies_02.R)

Figure B19: Appendix B (produced by firms_02.R)

Figure B20a: Appendix B (produced by firms_02.R)

Figure B20b: Appendix B (produced by firms_02.R)

Figure B21: Appendix B (produced by firms_02.R)

Figure B22: Appendix B (produced by firms_02.R)

Figure B23: Appendix B (produced by firms_02.R)

Figure B24: Appendix B (produced by parent_companies_01.R)

Figure B25: Appendix B (produced by parent_companies_01.R)

Figure B26: Appendix B (produced by parent_companies_01.R)

Figure B27: Appendix B (produced by parent_companies_01.R)

Figure B28: Appendix B (produced by parent_companies_01.R)

Figure B29: Appendix B (produced by parent_companies_01.R)

Figure B30: Appendix B (produced by parent_companies_01.R)

Figure B31: Appendix B (produced by parent_companies_02.R)

Figure B32: Appendix B (produced by parent_companies_02.R)

Figure B33: Appendix B (produced by parent_companies_02.R)

Figure B34: Appendix B (produced by parent_companies_02.R)

Figure B35: Appendix B (produced by firms_02.R)

Figure B36a: Appendix B (produced by firms_02.R)

Figure B36b: Appendix B (produced by firms_02.R)

Figure B37: Appendix B (produced by firms_02.R)

Figure B38a: Appendix B (produced by firms_02.R)

Figure B38b: Appendix B (produced by firms_02.R)

Figure B39: Appendix B (produced by firms_02.R)

Figure B40a: Appendix B (produced by firms_02.R)

Figure B40b: Appendix B (produced by firms_02.R)

Figure B41: Appendix B (produced by parent_companies_01.R)

Figure B42: Appendix B (produced by parent_companies_01.R)

Figure B43: Appendix B (produced by parent_companies_01.R)

Figure B44: Appendix B (produced by parent_companies_01.R)

Figure B45: Appendix B (produced by parent_companies_01.R)

Figure B46: Appendix B (produced by parent_companies_01.R)

Figure B47: Appendix B (produced by parent_companies_02.R)

Figure B48: Appendix B (produced by parent_companies_02.R)

Figure B49: Appendix B (produced by parent_companies_02.R)

Figure B50: Appendix B (produced by parent_companies_01.R)

Figure B51: Appendix B (produced by parent_companies_01.R)

Figure B52: Appendix B (produced by parent_companies_01.R)

Figure B53: Appendix B (produced by parent_companies_01.R)

Figure B54: Appendix B (produced by parent_companies_01.R)

Figure B55: Appendix B (produced by parent_companies_01.R)

Figure B56: Appendix B (produced by parent_companies_01.R)

Figure B57: Appendix B (produced by parent_companies_01.R)

Figure B58: Appendix B (produced by parent_companies_01.R)

Figure B59: Appendix B (produced by parent_companies_01.R)

Figure B60: Appendix B (produced by parent_companies_02.R)

Figure B61: Appendix B (produced by parent_companies_02.R)

Figure B62: Appendix B (produced by parent_companies_02.R)

Figure C1: Appendix B (produced by facilities_02.R)

Figure C2: Appendix B (produced by facilities_02.R)

Figure C3: Appendix B (produced by firms_02.R)

Figure C4: Appendix B (produced by firms_02.R)

Figure C5: Appendix B (produced by firms_02.R)

Figure C6: Appendix B (produced by firms_02.R)

Figure C7: Appendix B (produced by firms_02.R)

Figure C8: Appendix B (produced by firms_02.R)

Figure C9: Appendix B (produced by firms_02.R)

Figure C10: Appendix B (produced by firms_02.R)

Figure C11: Appendix B (produced by firms_02.R)

5. Software requirements

R Version: R 4.2.0

R Packages:

dplyr Version 1.0.10

pacman Version 0.5.1

ggplot2 Version 3.5.1

fixest Version 0.12.1

HonestDID 0.2.6

prodest Version 1.0.1

6. Approximate run time

facilities_01.R: < 1 minute

facilities_02.R: < 1 minute

firms_01.R: < 1 minute

firms_02.R: < 3 minutes

parent_companies_01.R: < 2 minutes

parent_companies_02.R: < 1 minute

References

Germeshausen, Robert, Bettina Chlond, Kinga Tchorzewska und Kathrine von Graevenitz (2022), ME-FINE: Mannheim European panel on Financial Indicators and Emissions, ZEW-Dokumentation Nr. 22-01, Mannheim