

Replication Package for Bingley, Cappellari and Ovidi (2026)

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Overview

The code in this replication package produces all exhibits in Bingley et al. (2026) using Stata. A single main file runs all the code to generate the data and create the 11 figures and 14 tables in the paper. Replicators should expect the code to run for 3 to 4 hours.

Data Availability Statement

All data used is secondary data. The data used in this analysis are confidential and drawn from Danish administrative registers. However, our access is not unique, and others can gain similar access by following a procedure described by Statistics Denmark at this [link](#). Researchers need to submit to Statistics Denmark a detailed research proposal describing the goals and methods of the project, an exhaustive list of variables, and the selection criteria to be used. Applications must be approved by the Danish Data Protection Agency to ensure that data are processed in a manner that protects the confidentiality of registered individuals. Conditional on this approval, Statistics Denmark will then determine which data one may obtain. All individual data processing occurs on servers located at Statistics Denmark via secure remote terminal access.

We certify that the authors of the manuscript have legitimate access to and permission to use the data used in this manuscript.

Dataset List

We organise the register data into the following yearly panel datasets used in our analysis. These data are extracted from register archives.

- plants.dta; includes characteristics of establishments.
- jobs.dta; includes matched employer-employee data on job spells.
- pnrdob.dta; includes dates of birth.
- unemp.dta; includes the duration of unemployment benefit receipt.
- earnings.dta; includes total labour earnings.
- income.dta; includes total post-tax income from all sources.
- pnrdobcmf.dta; includes the linkage of parents to children.
- schooling.dta; includes completed schooling.
- testscores.dta; includes end-of-school grades (9th grade).
- education-enrollment.dta;
- c_db93_1515_kt-1980-2003, c_db03_1515_kt-2003-2007, c_db07_1515_kt-2007-2017; map industry codes to sectors.
- wealth.dta; includes assets and debts.
- married.dta; includes marital status.
- homeval.dta; includes estate properties.
- sick.dta; includes sickness benefits paid by the municipality.
- homekomparish.dta; includes municipality and parish of residence.
- care-1976-2014.dta, pop-1971-2025.dta; include municipal-level childcare availability and the corresponding population of children.

Computational requirements

This replication package was written in Stata. The code was last run on version 19.5. However, the code should run without issue on version 16 and above. Beyond the default Stata packages, the replication requires to install the following user-written commands:

- reghdfe
- psmatch2
- regsave
- ereplace
- outreg2

The code was last run in 3 hours and 40 minutes on a 8-core Intel-based remote server with Windows 11, 512GB of RAM and 6TB of free disk space.

Description of code

The results can be replicated by running “Shell_replication.do”. This master code file sets the local directory paths at lines 11-17. The master code recalls 17 code files replicating the entire analysis, as described below.

- Data preparation codes.
 - “rep_plant_closure_80-16.do”: identifies plant closures.
 - “rep_workers_closure.do”: builds the worker-level panel and defines treated workers.
 - “rep_control_group.do”: links workers to their children, defines their treatment status, and match treated to untreated children to construct the estimation sample.
 - Ancillary codes prepare additional data merged to the main sample:
 - Codes beginning with “rep_Educ_outcomes” prepare 9th-grade teacher assessment data standardising grades at the subject-year level.
 - “rep_make_school_quality.do” prepares educational disruption outcomes and age-16 school enrollment status.
 - “rep_siblings_year.do” computes the birth of a younger sibling in each year.
 - “rep_childcare.do” prepares municipal-level childcare coverage.
- Data analysis codes.
 - “rep_results.do” estimates the main results.
 - “rep_Descriptives.do” produces descriptive statistics.
 - “rep_Carneiro.do” compares the main result to the Carneiro et al. (2024) approach.
 - “rep_Scores_distribution.do” estimates the distributional analysis.
 - “rep_check_closures.do” estimates the robustness checks.
 - “rep_ES_child.do” estimates event studies around parental plant closure.
 - “rep_Losses.do” estimates individual-level predicted parental outcome changes.
 - “rep_Mechs.do” estimates heterogeneous effects based on baseline characteristics, municipal-level childcare coverage, and predicted parental outcome changes.

List of Tables and Figures

The master code file maps all the exhibits in the paper to the corresponding code file. Within each code file, the lines producing each exhibit are marked. We report below the full list of exhibits with the corresponding code file.

- Main text.
 - Figure 1: “rep_results.do”.
 - Figure 2: “rep_Scores_distribution.do”.

- Figure 3: “rep_ES_child.do”.
- Figure 4: “rep_Mechs.do”.
- Figure 5: “rep_Mechs.do”.
- Table 1: “rep_Descriptives.do”.
- Table 2: “rep_results.do”.
- Table 3: “rep_results.do”.
- Table 4: “rep_Mech.do”.
- Online Appendix.
 - Table B.1: “rep_check_closures.do”.
 - Table B.2: “rep_check_closures.do”.
 - Figure C.1: “rep_Losses.do”.
 - Table C.1: “rep_Losses.do”.
 - Figure D.1: “rep_results.do”.
 - Figure D.2: “rep_ES_child.do”.
 - Figure D.3: “rep_ES_child.do”.
 - Figure D.4: “rep_Mechs.do”.
 - Figure D.5: “rep_Mech.do”.
 - Table D.1: “rep_Descriptives.do”.
 - Table D.2: “rep_Descriptives.do”.
 - Table D.3: “rep_Descriptives.do”.
 - Table D.4: “rep_Carneiro.do”.
 - Table D.5: “rep_results.do”.
 - Table D.6: “rep_Mechs.do”.
 - Table D.7: “rep_Mechs.do”.

The estimates in all of our tables were produced with Stata, exported with the command `outreg2` and later formatted by hand. The code reproduces all of the estimates and exports the raw version of these tables.