

**“Return of the Solow Paradox? IT, Productivity, and Employment in U.S. Manufacturing”**  
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**Data and Programs**

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*These files are provided in accordance with the editorial policy of the American Economic Review (<http://www.aeaweb.org/aer/data.php>). They are intended for use in replicating the particular analyses reported in the paper and its online appendix. We make no warrant as to their appropriateness for other purposes.*

**Basic overview:**

- The file “do/build/nber-ces-builder.do” prepares the main sample for estimation.
- The files in “do/analyze” create all figures and tables:
  - “main-text.do”: Creates all figures that appear in the main body of the paper.
  - “appendix-core.do”: Creates all figures/tables that appear in the online appendix, with the exception of Table A4.
  - “appendix-changes-on-changes.do”: Creates Table A4 in the online appendix.

**Key to appendix figures and tables:**

For the main text, output file names correspond to figure names used in the text.

For the appendix, file names correspond to figure/table names as follows:

- Figure A1: App-Figure-CompInvest-Vintage-LaborProd.pdf
- Figure A2: App-Figure-CompInvest-Vintage-RealShip.pdf
- Figure A3: App-Figure-CompInvest-Vintage-NomShip.pdf
- Figure A4: App-Figure-CompInvest-Vintage-Emp.pdf
- Figure A5: App-Figure-CompInvest-vs-SMT-TFP.pdf
- Figure A6: App-Figure-CompInvest-vs-SMT-NomVA.pdf
- Figure A7: App-Figure-CompInvest-vs-SMT-Prices.pdf
- Figure A8: App-Figure-CompInvest-NonProd-Prod.pdf (Panel A) and App-Figure-SMT-NonProd-Prod.pdf (Panel B)
- Table A1: Appendix-Summary-Stats.xlsx (Sheet “Outcome-Stats”)
- Table A2: Appendix-Summary-Stats.xlsx (Sheet “IT-Stats”)
- Table A3: Appendix-Summary-Stats.xlsx (Sheet “Correlations”)
- Table A4: Appendix-Changes-on-Changes.xlsx

**Provenance of the datasets used in this paper:**

**bbg:** The file *ci778287.dta*, containing computer investment data for 1977, 1982, and 1987, was provided to us by Eli Berman (and is included in this package with permission).

**cm:** Computer investment data for 1992, 2002, and 2007 were obtained as follows:

*cm1992.dta* is transcribed from data available at [http://www.census.gov/prod/www/economic\\_census.html](http://www.census.gov/prod/www/economic_census.html) (click on Economic Census 1992 => Manufactures => Industry Series Final). We extract two series from each .pdf file:

- We take the variable “nom\_invest\_cm1992” from Table 3b => Gross book value of depreciable assets => Total => New capital expenditures
- We take the variable “nom\_compinvest\_cm1992” from Table 3c => New machinery and equipment expenditures => Computers and peripheral data processing equipment

Some values are suppressed. Where possible, we bound suppressed computer investments using non-suppressed information and impute computer investments as the simple average of the lower and upper bounds.

*cm2002.dta* is a Stata version of the file “ECN\_2002\_US\_31I3.csv”, which can be downloaded through the US Census Bureau's American FactFinder tool ([factfinder2.census.gov](http://factfinder2.census.gov)). The table is coded as “EC0231I3” and its title is “Manufacturing: Industry Series: Detailed Statistics by Industry: 2002”, from the 2002 Economic Census.

*cm2007.dta* is a Stata version of the file “ECN\_2007\_US\_31I1.csv”, which can also be downloaded through American FactFinder. The table is “EC0731I1” and its title is “Manufacturing: Industry Series: Detailed Statistics by Industry for the United States: 2007”, from the 2007 Economic Census.

**nber-ces:** We downloaded the NBER-CES Manufacturing Industry Database from <http://www.nber.org/nberces>. The database is available in both a 1987 SIC version and a 1997 NAICS version. We combine the SIC-based dataset for the years 1963-1996 with the NAICS-based dataset for the years 1997-2009 and convert all data into a consistent set of 4-digit “sic87dd” industry codes.

**pce:** The file *pce.dta* contains the Personal Consumption Expenditures chain-type price index, downloaded from <http://www.gpoaccess.gov/eop/2012/B3.xls>. We have renormalized the index to equal unity in 2007.

**smt:** The files “smt88.dta” and “smt93.dta”, detailing technology usage within SIC industries 34-38, were provided to us by Kenneth Troske (and are included here with permission).

### **Provenance of the crosswalks used in this paper:**

- *naics07\_naics02.dta* is adapted from American FactFinder Table EC0700CBDG1.
- *naics02\_naics97.dta* is adapted from <http://www.census.gov/econ/census02/data/bridge>.
- *naics97\_sic87.dta* is adapted from “cw\_n97\_s87.dta” available at <http://www.cemfi.es/~dorn/data.htm>.
- *sic72\_sic87.dta* is adapted from “conc\_sic72\_sic87.dta” available at <http://www.nber.org/nberces>.
- *sic87\_sic87dd.dta* and *sic87dd\_key.dta* are adapted from “subfile\_sic87dd 2.do” and “Manufacturing\_Industry\_Codes.pdf”, available at <http://www.cemfi.es/~dorn/data.htm>.

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