

Readme File

Replication Package for “Dynamics of Expenditures on Durable Goods: the Role of New-Product Quality”

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1 Overview

This replication package contains all codes and part of the data to reproduce the results in the main text and appendix of “Dynamics of Expenditures on Durable Goods: the Role of New-Product Quality”. A part of the data used in the paper are proprietary and are thus not provided, as we explain in the following data availability statement.

2 Data Availability Statement

We certify that the authors of the manuscript have legitimate access to and permission to use the data used in this manuscript. We certify that the authors of the manuscript have documented permission to redistribute/publish the data contained within this replication package. Some data cannot be made publicly available.

The paper and the Online Appendices use several datasets. Details of each dataset follow in this list.

- The main text uses these datasets (cited in the paper):
 1. New-car prices
 - FILE: Several files in the folder
“./4.Confidential_data_not_for_publication/Dominion/Final”
 - SOURCES: [Dominion Dealer Solutions \(2019\)](#).
 - NOTES: Proprietary data.
 - PROVIDED: No, per agreement with Dominion Dealer Solutions.

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2. New-car Model Characteristics
 - FILE:
 - “./4.Confidential_data_not_for_publication/IHS_Characteristics/USA_data_2003_2019”
 - SOURCES: [IHS Markit \(2020\)](#).
 - NOTES: Proprietary data.
 - PROVIDED: No, per agreement with IHS Markit.
 3. State-level data on House Prices and Employment
 - 3.b Purchase Only Index of house prices from the Federal Housing Authority
 - FILE: “./3.replication/rawdata_replication/OH_TX/State_houseprice_purchaseonly.csv”
 - SOURCES: [Gertler and Gilchrist \(2018\)](#).
 - NOTES: Open Access. Downloaded in 2022.
 - PROVIDED: Yes
 - 3.b Total Nonfarm Employment
 - FILE: “./3.replication/rawdata_replication/OH_TX/State_employmenttotal_nonfarm.csv”
 - SOURCES: [Gertler and Gilchrist \(2018\)](#).
 - NOTES: Open Access. Downloaded in 2022.
 - PROVIDED: Yes.
- The Online Appendices use these datasets (cited in the Online Appendices):
4. Personal Consumption Expenditures; Light Weight Vehicle Sales
 - 4.a Personal Consumption Expenditures: Durable Goods and Motor Vehicles and Parts
 - FILE: “./3.replication/rawdata_replication/PCE/DMOTRC1Q027SBEA.csv”
“./3.replication/rawdata_replication/PCE/PCEDG.csv”
 - SOURCES: [US Bureau of Economic Analysis \(2022\)](#).
 - NOTES: Open Access. Downloaded in 2022.
 - PROVIDED: Yes.
 - 4.b Light Weight Vehicle Sales: Autos and Light Trucks
 - FILE: “./3.replication/rawdata_replication/stock/ALTSALES.xls”,
 - SOURCES: [US Bureau of Economic Analysis \(2022\)](#).
 - NOTES: Open Access. Downloaded in 2022.
 - PROVIDED: Yes.

3 Computational Requirements

We run all codes on the Windows 10 operating system.

- Stata (the code was last run in version 17 Standard Edition)

- Need package rsource, from <http://fmwww.bc.edu/RePEc/bocode/r>
- Need package unique, from <http://fmwww.bc.edu/RePEc/bocode/u>
- Need package esttab, from <http://fmwww.bc.edu/RePEc/bocode/e>
- Need package estout, from <http://fmwww.bc.edu/RePEc/bocode/e>
- Need package eststo, from <http://fmwww.bc.edu/RePEc/bocode/e>
- Need package texsave, from <http://fmwww.bc.edu/RePEc/bocode/t>
- Matlab (code was last run in version 2016a)
- R (code was last run in version 4.2.2)
 - Need package Rtools 4.2, from <https://cran.r-project.org/bin/windows/Rtools/>

For reproducibility, we set a seed in R in line 19 of “.replication/R_code/Merging_algorithm_FV.R”

3.1 Run-time Requirements

- Stata code runs in approximately 1.5 hours.
- Matlab code runs in less than 2 minutes.

The code was run in a 2017 HP Pavillion Laptop, Intel(R) Core(TM) i7-8550U CPU @ 1.80GHz 1.99 GHz / 8 GB RAM.

4 Instructions for Replication

To replicate the results in the paper:

1. In Stata,
 - Open the file masterfile_replication.do located in “./3.replication/stata_code/”.
 - Change line 14 of the code with the path of the directory where the replication folder has been unzipped (Note: the path must not include spaces)
 - Change line 16 of the code with the path of the Rterm.exe file in the R program installation package (Note: the path must not include spaces)
 - Run the file masterfile_replication.do located in “./3.replication/stata_code/”.
2. In Matlab
 - Open the code master_carrecovery.m located in “./3.replication/matlab_code/”.
 - Change line 4 of the code with the path of directory of the unzipped replication folder (Note: the path must not include spaces)
 - Run the code master_carrecovery.m

All intermediate datasets for the analysis are saved in the folder “./3.replication/deriveddatasets/”. All the figures and tables are saved in the folder “./3.replication/figures/”.

5 Files Description

5.1 Stata Codes

All Stata codes are in “./3.replication/stata_code”. The overall folder structure is as follows:

- parent folder
- “./3.replication/stata_code/build”
- “./3.replication/stata_code/analysis”

Important: To replicate the paper from scratch, run the file `masterfile_replication.do` located in the parent folder. This is the “master file”. Simply run the master file to get all the numbers and plot the associated figures and tables in the main text and appendices (see Section 3 for a list of figures and tables generated by the file and mapping to the paper ordering). The master file install some additional packages from Stata necessary to run the code.

The file `scheme-s2colorag.scheme` in the parent folder is a modified scheme for plots in Stata, which is called is in the `masterfile_replication.do` dofile.

5.1.1 Dataset construction folder (i.e., ./3.replication/stata_code/build)

The datasets construction folder contains the following scripts:

- `cr_RP_master_newprice.do` imports raw data from Dominion Dealer Solutions in Stata
- `cr_RP_d_IHS_charact.do` imports raw data from IHS Markit in Stata
- `cr_RP_d_entryexit_models_IHS_char.do` cleans data on car characteristics from IHS Markit
- `cr_RP_d_entryexit_models_IHS_char_regs.do` prepares cleaned data on car characteristics from IHS Markit for the regressions of subsection 3.4 of the paper.
- `cr_RP_d_entryexit_models_IHS_char_regs.do` prepares cleaned data on car characteristics—differentiating between trims within the same model definition—from IHS Markit.
- `cr_RP_d_dominion_model_list.do` extracts a list of model names from Dominion data for model-name matching in R using the code `./3.replication/R_code/Merging_algorithm_FV.R`
- `cr_RP_d_IHS_model_list.do` extracts a list of model names from IHS Markit data for model-name matching in R using the code `./3.replication/R_code/Merging_algorithm_FV.R`

- `cr_RP_d_dominion_model_year_list.do` extracts a list of model-names - model-year pairs from Dominion data for model-matching in R using the code `./3.replication/R_code/Merging_algorithm_FV.R`
- `cr_RP_d_IHS_model_year_list.do` extracts a list of model-names - model-year pairs from IHS Markit data for model-matching in R using the code `./3.replication/R_code/Merging_algorithm_FV.R`
- `cr_RPa_d_newmodels_matchIHS_dominion.do` imports in Stata the output files of the name-matching code `./3.replication/R_code/Merging_algorithm_FV.R`
- `cr_RPa_d_expshare_matchIHS_newmodels_dominion.do` creates a dataset with Dominion transactions data combined with information on model-matching for the plots of subsection 3.1 and 3.2 of the paper.
- `cr_RP_d_pricechar_matchIHS_dominion.do` creates a dataset with IHS car characteristics combined with information on average price by model
- `cr_RP_d_expshare_matchIHS_newmodels_dominion_harmonmaker.do` creates a dataset with Dominion transactions data combined with information on model-matching and on the geographic origin of car makers.
- `cr_RP_d_pricechar_matchIHS_dominion_rrcol_stateweights.do` creates a dataset with IHS car characteristics combined with information on average price by model, using State-specific transactions as weights for aggregation.

5.1.2 Figures / Tables generation folder (i.e., `./3.replication/stata_code/analysis`)

The figures/tables generation folder contains the following scripts:

- `an_RP_figure1.do` produces Figure 1 of the paper.
- `an_RP_figure2.do` produces Figure 2 of the paper.
- `an_RP_figure3c.do` produces Figure 3 panel (c) of the paper.
- `an_RP_figure4.do` produces Figure 4 of the paper.
- `an_RP_figure5.do` produces Figure 5 of the paper.
- `an_RP_figureB2.do` produces Figure B2 of the Appendix.
- `an_RP_figureB3.do` produces Figure B3 of the Appendix.
- `an_RP_figureB4.do` produces Figure B4 of the Appendix.
- `an_RP_figureB5.do` produces Figure B5 of the Appendix.

- `an_RP_figureB6.do` produces Figure B6 of the Appendix.
- `an_RP_figureB7.do` produces Figure B7 of the Appendix.
- `an_RP_figureB8.do` produces Figure B8 of the Appendix.
- `an_RP_figureB9.do` produces Figure B9 of the Appendix.
- `an_RP_figureB10.do` produces Figure B10 of the Appendix.
- `an_RP_figureB11.do` produces Figure B11 of the Appendix.
- `an_RP_figureB12.do` produces Figure B12 of the Appendix.
- `an_RP_figureB13ab.do` produces Figure B13 panels (a) and (b) of the Appendix.
- `an_RP_figureB13c.do` produces Figure B13 panel(c) of the Appendix.
- `an_RP_figureB14.do` produces Figure B14 of the Appendix.
- `an_RP_figureB15.do` produces Figure B15 of the Appendix.
- `an_RP_figureB16.do` produces Figure B16 of the Appendix.
- `an_RP_figureB17input.do` produces a .txt file with the coefficients of Figure B16 panel (a), used by Matlab codes to produce Figure B17 of the Appendix.
- `an_RP_tableB1A.do` produces the numbers of panel (a) of Table B1 of the Appendix.
- `an_RP_tableB1B.do` produces the numbers of panel (b) of Table B1 of the Appendix.
- `an_RP_tableB2.do` produces the numbers of Table B2 of the Appendix.
- `an_RP_specific_figures.do` produces the specific figures in the text of the paper and writes in the folder “./3.replication/figures/” the Excel file `tab_inpaper_figures_stata.xls` that stores them.
- `an_RP_specific_figures_appendix.do` produces the specific figures in the text of the paper Appendix and writes in the folder “./3.replication/figures/” the Excel file `tab_inpaper_appendix_figures_stata.xls` that stores them. It uses one subfile
 - `cr_RP_d_pricechar_matchIHS_dominion_rrcol_stateweights.do` in the folder “./3.replication/stata_code/build”, which creates a dataset with IHS car characteristics combined with information on average price by model, using State-specific transactions as weights for aggregation.

5.2 Matlab Codes

All Matlab codes are in `./3.replication/matlab_code`.

Important: To replicate the paper from scratch, simply run the file `master_carrecovery.m` located in the parent folder.

5.2.1 Parent folder (i.e., `./matlab_code`)

The parent folder contains the following scripts

- `master_carrecovery.m` ; This is the “master file”. Simply run the master file from the command line to generate Figure 3 panels (a) and (b), Figure B1, Figure B17, and specific numbers in the paper or in the Appendix (see Section 3 for a list of figures and tables generated by the file and mapping to the paper ordering).
- `an_RP_figure3ab.m` produces Figure 3 panels (a) and (b) of the paper.
- `an_RP_figureB1.m` produces Figure B1 of the Appendix.
- `an_RP_figureB17.m` produces Figure B17 of the Appendix.

5.3 R Codes

All R codes are in `./3.replication/R_code`. R codes are only called by the “master” Stata code `masterfile_replication.do` in the folder `./3.replication/stata_code/`.

5.3.1 Parent folder (i.e., `./R_code`)

The parent folder contains the following scripts

- `Merging_algorithm_FV.R` that performs model-name matching for model-years in Dominion and IHS. The code uses as inputs the files `d_dominion_model_list.dta`, `d_dominion_model_yer_list.dta`, `d_IHS_model_list.dta`, and `d_IHS_model_yer_list.dta` that are saved in the folder by the codes `./3.replication/stata_code/cr_RP_d_dominion_model_list.dta`, `./3.replication/stata_code/cr_RP_d_dominion_model_yer_list.dta`, `./3.replication/stata_code/cr_RP_d_IHS_model_list.dta`, and `./3.replication/stata_code/cr_RP_d_IHS_model_yer_list.dta`, respectively. The code generates as output the files `algorithm_dominion_IHS_model_list_output.xls` and `algorithm_dominion_IHS_model_year_list_output.xls`.

5.4 figures folder (i.e., `./3.replication/figures`)

This folder collects all the figures reported in the paper. See section 3 for a list and mapping to the paper. All figures are stored as `.eps` files.

5.5 deriveddatasets folder (i.e., ./3.replication/deriveddatasets)

This folder collects all the datasets used for the analyses.

6 List of Tables, Figures, and Numbers

All figures are stored as .eps files and all tables are stored as .tex files.

6.1 List of Tables, Figures, and Numbers from Stata

6.1.1 Figures - Main text

The figures are saved in the folder ./3.replication/figures/ as follows:

- fig_1a ; Figure 1a in main text, produced at lines 68-70 of the dofile an_RP_figure1.do
- fig_1b ; Figure 1b in main text, produced at lines 73-74 of the dofile an_RP_figure1.do
- fig_1c ; Figure 1c in main text, produced at lines 77-78 of the dofile an_RP_figure1.do
- fig_1d ; Figure 1d in main text, produced at lines 81-85 of the dofile an_RP_figure1.do
- fig_2a ; Figure 2a in main text, produced at lines 146-152 of the dofile an_RP_figure2.do
- fig_2b ; Figure 2b in main text, produced at lines 156-162 of the dofile an_RP_figure2.do
- fig_2c ; Figure 2c in main text, produced at lines 166-172 of the dofile an_RP_figure2.do
- fig_2d ; Figure 2d in main text, produced at lines 176-179 of the dofile an_RP_figure2.do
- fig_3c ; Figure 3c in main text, produced at lines 39-62 of the dofile an_RP_figure3c.do
- fig_4a ; Figure 4a in main text, produced at lines 83-86 of the dofile an_RP_figure4.do
- fig_4b ; Figure 4b in main text, produced at lines 160-163 of the dofile an_RP_figure4.do
- fig_5a ; Figure 5a in main text, produced at lines 114-124 of the dofile an_RP_figure5.do
- fig_5b ; Figure 5b in main text, produced at lines 229-238 of the dofile an_RP_figure5.do

6.1.2 Figures - Appendix

The figures are saved in the folder ./3.replication/figures/ as follows:

- fig_B2a ; Figure B2a in Appendix B, produced at lines 67-69 of the dofile an_RP_figureB2.do
- fig_B2b ; Figure B2b in Appendix B, produced at lines 72-73 of the dofile an_RP_figureB2.do
- fig_B2c ; Figure B2c in Appendix B, produced at lines 76-77 of the dofile an_RP_figureB2.do
- fig_B2d ; Figure B2d in Appendix B, produced at lines 80-84 of the dofile an_RP_figureB2.do

- fig_B3a ; Figure B3a in Appendix B, produced at lines 64-66 of the dofile an_RP_figureB3.do
- fig_B3b ; Figure B3b in Appendix B, produced at lines 69-70 of the dofile an_RP_figureB3.do
- fig_B3c ; Figure B3c in Appendix B, produced at lines 73-74 of the dofile an_RP_figureB3.do
- fig_B3d ; Figure B3d in Appendix B, produced at lines 77-81 of the dofile an_RP_figureB3.do
- fig_B4a ; Figure B4a in Appendix B, produced at lines 170-176 of the dofile an_RP_figureB4.do
- fig_B4b ; Figure B4b in Appendix B, produced at lines 180-186 of the dofile an_RP_figureB4.do
- fig_B4c ; Figure B4c in Appendix B, produced at lines 188-194 of the dofile an_RP_figureB4.do
- fig_B4d ; Figure B4d in Appendix B, produced at lines 197-200 of the dofile an_RP_figureB4.do
- fig_B5a ; Figure B5a in Appendix B, produced at lines 166-172 of the dofile an_RP_figureB5.do
- fig_B5b ; Figure B5b in Appendix B, produced at lines 176-182 of the dofile an_RP_figureB5.do
- fig_B5c ; Figure B5c in Appendix B, produced at lines 186-192 of the dofile an_RP_figureB5.do
- fig_B5d ; Figure B5d in Appendix B, produced at lines 196-199 of the dofile an_RP_figureB5.do
- fig_B6 ; Figure B6 in Appendix B, produced at lines 87-99 of the dofile an_RP_figureB6.do
- fig_B7 ; Figure B7 in Appendix B, produced at lines 104-107 of the dofile an_RP_figureB7.do
- fig_B8 ; Figure B8 in Appendix B, produced at lines 103-106 of the dofile an_RP_figureB7.do
- fig_B9a ; Figure B9a in Appendix B, produced at lines 27-31 of the dofile an_RP_figureB9.do
- fig_B9b ; Figure B9b in Appendix B, produced at lines 48-49 of the dofile an_RP_figureB9.do
- fig_B10a ; Figure B10a in Appendix B, produced at lines 37-41 of the dofile an_RP_figureB10.do
- fig_B10b ; Figure B10b in Appendix B, produced at lines 71-75 of the dofile an_RP_figureB10.do
- fig_B11 ; Figure B11 in Appendix B, produced at lines 32-34 of the dofile an_RP_figureB11.do

- fig_B12a ; Figure B12a in Appendix B, produced at lines 98-101 of the dofile an_RP_figureB12.do
- fig_B12b ; Figure B12b in Appendix B, produced at lines 172-175 of the dofile an_RP_figureB12.do
- fig_B12c ; Figure B12c in Appendix B, produced at lines 259-262 of the dofile an_RP_figureB12.do
- fig_B12d ; Figure B12d in Appendix B, produced at lines 338-341 of the dofile an_RP_figureB12.do
- fig_B13a ; Figure B13a in Appendix B, produced at lines 114-122 of the dofile an_RP_figureB13ab.do
- fig_B13b ; Figure B13b in Appendix B, produced at lines 230-239 of the dofile an_RP_figureB13ab.do
- fig_B13c ; Figure B13c in Appendix B, produced at lines 125-133 of the dofile an_RP_figureB13c.do
- fig_B14a ; Figure B14a in Appendix B, produced at lines 145-154 of the dofile an_RP_figureB14.do
- fig_B14b ; Figure B14b in Appendix B, produced at lines 269-278 of the dofile an_RP_figureB14.do
- fig_B14c ; Figure B14c in Appendix B, produced at lines 394-403 of the dofile an_RP_figureB14.do
- fig_B15 ; Figure B15 in Appendix B, produced at lines 155-165 of the dofile an_RP_figureB15.do
- fig_B16a ; Figure B16a in Appendix B, produced at lines 95-99 of the dofile an_RP_figureB16.do
- fig_B16b ; Figure B16b in Appendix B, produced at lines 187-192 of the dofile an_RP_figureB16.do

6.1.3 Tables - Appendix

The tables are saved in the folder ./3.replication/figures/ as follows:

- tab_B1A.tex ; Table B1 panel (a) in Appendix B, produced at lines 92-95 of the dofile an_RP_tableB1A.do
- tab_B1B.tex ; Table B1 panel (b) in Appendix B, produced at line 124 of the dofile an_RP_tableB1B.do
- tab_B2.tex ; Table B2 in Appendix B, produced at lines 95-98 of the dofile an_RP_tableB2.do

6.1.4 Numbers - Main text

The files referenced here are saved in the folder `./3.replication/figures/`.

All numbers referenced to in the text are saved in the Excel file `tab_inpaper_figures_stata.xls` and created by the dofile `an_RP_specific_figures.do` as follows

- Number of transactions (approximately 16.5 million) is produced by the code `an_RP_specific_figures.do` at line 15
- Average model life (around 5.8) is produced by the code `an_RP_specific_figures.do` at line 43
- Number of models (“more than 500”) is produced by the code `an_RP_specific_figures.do` at line 59
- Percentage of models with missing weight information (38.36) is produced by the code `an_RP_specific_figures.do` at line 82
- R-squared of weight imputation regression (0.93) is produced by the code `an_RP_specific_figures.do` at line 106
- Percentage drop in new cars sales (-30.88) is produced by the code `an_RP_specific_figures.do` at line 138
- Yearly % growth rate in average transaction price (1.6%) is produced by the code `an_RP_specific_figures.do` at line 168
- Average transaction price in 2007 (27225.66) is produced by the code `an_RP_specific_figures.do` at line 182-235
- Peak-to-trough decline in average price (%) (-2.10) is produced by the code `an_RP_specific_figures.do` at line 182-235
- Standard deviation of prices in 2007 (13613.61) is produced by the code `an_RP_specific_figures.do` at line 182-235
- Peak-to-trough decline in standard deviation of prices (%) (-5.00) is produced by the code `an_RP_specific_figures.do` at line 182-235
- Percentage decline of average price relative to trend (-3.01) is produced by the code `an_RP_specific_figures.do` at line 182-235
- Percentage decline of price standard deviation to trend (-6.09) is produced by the code `an_RP_specific_figures.do` at line 182-235
- Percentage of total variance accounted for by within-model component (19.85) is produced by the code `an_RP_specific_figures.do` at line 253-350
- Percentage of total variance accounted for by between-model component (80.15) is produced by the code `an_RP_specific_figures.do` at line 253-350

- Average pre-recession price for all models (26144.47) is produced by the code `an_RP_specific_figures.do` at line 365-403
- Average pre-recession price for new models (28079.63) is produced by the code `an_RP_specific_figures.do` at line 365-403
- Average price for all models in 2008 (26927.22) is produced by the code `an_RP_specific_figures.do` at line 365-403
- Average price for new models in 2008 (25763.89) is produced by the code `an_RP_specific_figures.do` at line 365-403
- Share of transactions on new models in 2007 (0.35) is produced by the code `an_RP_specific_figures.do` at line 365-403
- Share of transactions on new models in 2009 (0.19) is produced by the code `an_RP_specific_figures.do` at line 365-403
- Share of first generation new models over new models in 2007 (0.48) is produced by the code `an_RP_specific_figures.do` at line 424-467
- 2009-2007 change in the share of first generation new models (perc. points) (-3.98) is produced by the code `an_RP_specific_figures.do` at line 424-467
- 2009-2007 change in the share of new models (perc. points) (-9.51) is produced by the code `an_RP_specific_figures.do` at line 424-467
- Share of transactions in Ohio and Texas over total transactions (0.80) is produced by the code `an_RP_specific_figures.do` at line 483-507
- Yearly growth of average price in 2009-2012 (perc. points) (2.16) is produced by the code `an_RP_specific_figures.do` at line 528-606
- Total growth of average price in 2007-2012 (perc. points) (7.25) is produced by the code `an_RP_specific_figures.do` at line 528-606
- Total growth of quality-predicted price in 2007-2012 (perc. points) (-1.33) is produced by the code `an_RP_specific_figures.do` at line 528-606
- Pre-Post-recession percentage change in wheelbase hedonic price (31.37) is produced by the code `an_RP_specific_figures.do` at line 621-688
- Pre-Post-recession percentage change in horse power hedonic price (25.79) is produced by the code `an_RP_specific_figures.do` at line 621-688
- Percentage of between-model price standard deviation explained by characteristics (98.41) is produced by the code `an_RP_specific_figures.do` at line 705-809
- Quality drop for new models in 2006-2008 (percentage points) (-4.94) is produced by the code `an_RP_specific_figures.do` at line 835-865

6.1.5 Numbers - Appendix

The files referenced here are saved in the folder `./3.replication/figures/`.

All numbers referenced to in the text are saved in the Excel file `tab_inpaper_appendix_figures_stata.xls` and created by the dofile `an_RP_specific_figures_appendix.do` as follows

- Percentage of unmatched models (19.13) is produced by the code `an_RP_specific_figures_appendix.do` at line 14-26
- Percentage of fleet sales (4.45) is produced by the code `an_RP_specific_figures_appendix.do` at line 41-55
- Number of new models by European makers - 2007 (24) is produced by the code `an_RP_specific_figures_appendix.do` at line 66-109
- Number of expensive new models by European makers - 2007 (17) is produced by the code `an_RP_specific_figures_appendix.do` at line 66-109
- Number of new models by American makers - 2007 (26) is produced by the code `an_RP_specific_figures_appendix.do` at line 66-109
- Number of expensive new models by American makers - 2007 (5) is produced by the code `an_RP_specific_figures_appendix.do` at line 66-109
- Percentage drop in new expensive models by European makers, 2009-2007 (-47.06) is produced by the code `an_RP_specific_figures_appendix.do` at line 66-109
- Peak-to-trough percentage drop in quality-predicted prices - Ohio (approximately 2%) is produced by the code `an_RP_specific_figures_appendix.do` at line 127-211
- Peak-to-trough percentage drop in quality-predicted prices - Texas (approximately 1%) is produced by the code `an_RP_specific_figures_appendix.do` at line 127-211

6.2 List of Tables, Figures, and Numbers from Matlab

6.2.1 Figures - Main text

The figures are saved in the folder `./3.replication/figures/` and produced by `.m` files in the folder `./3.replication/matlab_code/` as follows:

- `fig_3a` ; Figure 3a in main text, produced at lines 12-21 of the Matlab code `an_RP_figure3ab.m`
- `fig_3b` ; Figure 3b in main text, produced at lines 33-41 of the Matlab code `an_RP_figure3ab.m`

6.2.2 Figures - Appendix

The figures are saved in the folder `./3.replication/figures/` and produced by `.m` files in the folder `./3.replication/matlab_code/` as follows:

- `fig_B1a` ; Figure B1a in Appendix B, produced at lines 20-26 of the Matlab code `an_RP_figureB1.m`
- `fig_B1b` ; Figure B1b in Appendix B, produced at lines 28-34 of the Matlab code `an_RP_figureB1.m`
- `fig_B17` ; Figure B17 in Appendix B, produced at lines 65-76 of the Matlab code `an_RP_figureB17.m`

6.2.3 Numbers - Main text and Appendix

The files referenced here are saved in the folder `./3.replication/figures/`.

All numbers referenced to in the text are saved in the Excel file `tab.inpaper_appendix_figures_stata.xls` and created by the dofile `an_RP_specific_figures_appendix.do` as follows

- Vehicles purchases as a share of durable goods consumption (percentage points) (35.45) is produced by the code `an_RP_figureB1.m` at line 10
- Percentage drop in durable good consumption (16.80) is produced by the code `an_RP_figureB1.m` at line 13
- Percentage drop in vehicle expenditures relative to drop in durable consumption (53.00) is produced by the code `an_RP_figureB1.m` at line 17
- House prices drop in Ohio (percentage points) (9.99) is produced by the code `an_RP_figure3ab.m` at line 24
- Employment drop in Ohio (percentage points) (7.86) is produced by the code `an_RP_figure3ab.m` at line 45
- Total decline in quality of car stock (perc. points) (1.33) is produced by the code `an_RP_figureB17.m` at line 83
- Decline in quality of car stock due to lower replacement (perc. points) (0.43) is produced by the code `an_RP_figureB17.m` at line 84
- Decline in quality of car stock due to lower new models quality (perc. points) (almost one percentage point) is produced by the code `an_RP_figureB17.m` at line 85

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- DOMINION DEALER SOLUTIONS (2019): “Data on New-Car Prices, 2004-2012,” Norfolk, VA.
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- IHS MARKIT (2020): “Data on New-Car Model Characteristics, 2003-2012,” London, UK.
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