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READ ME FILE FOR DATA AND PROGRAMS

Paper: "Who Benefits from Environmental Regulation? Evidence from the Clean Air Act Amendments"
Authors: Antonio Bento, Matthew Freedman, and Corey Lang
Journal: Review of Economics and Statistics
Date: September 8, 2014

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SOFTWARE

Software Used: Stata-MP Version 10 for Windows
Files provided are Stata datasets (.dta) and programs (.do).

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DESCRIPTION OF DATA FILES
(variable lists below)

BentoFreedmanLang_RESTAT_Main.dta
Dataset containing Decennial Census and air quality data for Tables 1-7, excl. Panel B of Table 5
Source(s): Geolytics Neighborhood Change Database (derived from U.S. Census Bureau's Decennial Census), Environmental Protection Agency's Air Quality Standards database

BentoFreedmanLang_RESTAT_5B.dta
Dataset containing Decennial Census and air quality data for Table 6, Panel B.
Source(s): Geolytics Neighborhood Change Database (derived from Decennial Census), Environmental Protection Agency's Air Quality Standards database

BentoFreedmanLang_RESTAT_FIG1.dta
Dataset containing QCEW data for Figure 2.
Source(s): Environmental Protection Agency's Air Quality Standards database

BentoFreedmanLang_RESTAT_FIG2_3.dta
Dataset containing QCEW data for Figures 3 and 4.
Source(s): Geolytics Neighborhood Change Database (derived from Decennial Census), Environmental Protection Agency's Air Quality Standards database

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DESCRIPTION OF PROGRAM FILES

BentoFreedmanLang_RESTAT.do
Program to generate tables and figures in the paper. Calls on 4 datasets:
BentoFreedmanLang_RESTAT_Main.dta, BentoFreedmanLang_RESTAT_5B.dta,
BentoFreedmanLang_RESTAT_FIG1.dta, BentoFreedmanLang_RESTAT_FIG2_3.dta

To run BentoFreedmanLang_RESTAT.do, put program file and all 4 datasets and program in the same directory.

Running BentoFreedmanLang_RESTAT.do will generate a log file (BentoFreedmanLang_RESTAT_log.txt) from which regression output can be read, as well as Stata graphs (.gph) for each of the three figures in the paper.

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DATASET CONTENTS

Contains data from **BentoFreedmanLang_RESTAT_Main.dta**
  obs: 1,827
 vars: 86   3 Sep 2014 09:47
 size: 643,104

variable name	storage type	display format	value label	variable label
state_code	float	%10.0g		numeric state identifier
county_code	float	%10.0g		numeric county identifier
site_id	float	%10.0g		site identifier of air quality monitor
cnty_instr	float	%9.0g		county non-attainment instrument
pol_90	float	%9.0g		1990 PM10 concentration
pol_dif	float	%9.0g		Change in PM10 concentration 2000-1990
mntr_instr	float	%9.0g		monitor non-attainment instrument
mntr_cont_in~91	float	%9.0g		equals the maximum of pm10 value in 1991 minus 50 or 0
share_white_90	float	%9.0g		Share of population that is white 1990
share_same_h~90	float	%9.0g		Share of households living in same house as 5 years ago 1990
share_unempl~90	float	%9.0g		Share of population that is unemployed 1990
median_famil~90	float	%9.0g		Median family income 1990
median_house~90	float	%9.0g		Median house value 1990
median_rent_90	float	%9.0g		Median monthly rent 1990
factor	float	%9.0g		CMHPI price index change 2000-1990
total_housin~90	double	%9.0g		Total number of housing units 1990
owner_occupi~90	double	%9.0g		number of owner occupied units 1990
share_occ_ow~90	float	%9.0g		Share of housing units that are owner occupied 1990
pop_dense_90	float	%9.0g		Population density 1990
pop_dense_dif	float	%9.0g		Change in Population density 2000-1990
total_housing~f	float	%9.0g		Change in Total number of housing units 2000-1990
share_units_o~f	float	%9.0g		Change in Share of owner housing units occupied 2000-1990
share_black_dif	float	%9.0g		Change in share of population that is black 2000-1990
share_white_dif	float	%9.0g		Change in Share of population that is white 2000-1990
share_latino_~f	float	%9.0g		Change in share of population that is latino 2000-1990
share_kids_dif	float	%9.0g		Change in share of population that is under 5 years old 2000-1990
share_over_65~f	float	%9.0g		Change in share of population that is over 65 years old 2000-1990
share_foreign~f	float	%9.0g		Change in share of population that is foreign born 2000-1990
share_female_~f	float	%9.0g		Change in share of households with female head 2000-1990
share_same_ho~f	float	%9.0g		Change in share of households living in same house as 5 years ago 2000-1990
share_unemplo~f	float	%9.0g		Change in Share of population that is unemployed 2000-1990
share_manuf_e~f	float	%9.0g		Change in share of population employed in manufacturing 2000-1990
share_poor_dif	float	%9.0g		Change in share of population in poverty 2000-1990
share_public_~f	float	%9.0g		Change in share of population receiving public assistance 2000-1990
median_family~f	float	%9.0g		Change in Median family income 2000-1990
ln_med_fam_in~f	float	%9.0g		Change in log of family income 2000-1990
median_house_~f	float	%9.0g		Change in Median house value 2000-1990
ln_median_hou~f	float	%9.0g		Change in log median house value 2000-1990
share_edu_les~f	float	%9.0g		Change in share of population with less than high school degree 2000-1990
share_edu_16p~f	float	%9.0g		Change in share of population with college degree or more 2000-1990
share_heat_co~f	float	%9.0g		Change in share of housing units using coal for heat 2000-1990
share_heat_wo~f	float	%9.0g		Change in share of housing units using wood for heat 2000-1990
share_kitchen~f	float	%9.0g		Change in share of housing units without a kitchen 2000-1990
share_plumbin~f	float	%9.0g		Change in share of housing units with full plumbing 2000-1990
share_occ_own~f	float	%9.0g		Change in Share of housing units that are owner occupied 2000-1990
shar~10_own_dif	float	%9.0g		Change in Share of owner housing units that are between 5 and 10 years old 2000-
shar~20_own_dif	float	%9.0g		Change in Share of owner housing units that are between 10 and 20 years old 2000
shar~30_own_dif	float	%9.0g		Change in Share of owner housing units that are between 20 and 30 years old 2000
shar~40_own_dif	float	%9.0g		Change in Share of owner housing units that are between 30 and 40 years old 2000
shar~50_own_dif	float	%9.0g		Change in Share of owner housing units that are between 40 and 50 years old 2000
share~s_own_dif	float	%9.0g		Change in Share of owner housing units that are more than 50 years old 2000-1990
shar~10_rnt_dif	float	%9.0g		Change in Share of rental housing units that are between 5 and 10 years old 2000
shar~20_rnt_dif	float	%9.0g		Change in Share of rental housing units that are between 10 and 20 years old 200
shar~30_rnt_dif	float	%9.0g		Change in Share of rental housing units that are between 20 and 30 years old 200
shar~40_rnt_dif	float	%9.0g		Change in Share of rental housing units that are between 30 and 40 years old 200
shar~50_rnt_dif	float	%9.0g		Change in Share of rental housing units that are between 40 and 50 years old 200
share~s_rnt_dif	float	%9.0g		Change in Share of rental housing units that are more than 50 years old 2000-199
share~d_own_dif	float	%9.0g		Change in Share of owner housing units that are single and detached 2000-1990
share~a_own_dif	float	%9.0g		Change in Share of owner housing units that are single attached units 2000-1990
share_mob~n_dif	float	%9.0g		Change in Share of owner housing units that are mobile homes 2000-1990
share~d_rnt_dif	float	%9.0g		Change in Share of rental housing units that are detached units 2000-1990
share~a_rnt_dif	float	%9.0g		Change in Share of rental housing units that are attached units 2000-1990
share_mob~t_dif	float	%9.0g		Change in Share of rental housing units that are mobile homes 2000-1990
share_bdrm2_r~f	float	%9.0g		Change in Share of rental housing units with 2 bedrooms 2000-1990
share_bdrm3_r~f	float	%9.0g		Change in Share of rental housing units with 3 bedrooms 2000-1990
share_bdrm4_r~f	float	%9.0g		Change in Share of rental housing units with 4 bedrooms 2000-1990

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share_bdrm5_r~f float  %9.0g                 Change in Share of rental housing units with 5 or more bedrooms 2000-1990
share_bdrm2_o~f float  %9.0g                 Change in Share of owner housing units with 2 bedrooms 2000-1990
share_bdrm3_o~f float  %9.0g                 Change in Share of owner housing units with 3 bedrooms 2000-1990
share_bdrm4_o~f float  %9.0g                 Change in Share of owner housing units with 4 bedrooms 2000-1990
share_bdrm5_o~f float  %9.0g                 Change in Share of owner housing units with 5 or more bedrooms 2000-1990
median_rent_dif float  %9.0g                 Change in Median monthly rent 2000-1990
ln_med_rent_dif float  %9.0g                 Change in 2000-1990
fips2           float  %9.0g                 FIPS code
ring            float  %9.0g                 1 is 0-1 miles, 3 is 1-3 miles, 5 is 3-5 miles, 10 is 5-10 miles, 20 is 10-20 mi
share_10yrs_~90 float  %9.0g                 Share of housing units that are less than 10 years old 1990
share_10yrs_l~f float  %9.0g                 Change in Share of housing units that are less than 10 years old 2000-1990
share_3m_bed~90 float  %9.0g                 Share of housing units that have 3 or more bedrooms 1990
share_3m_beds~f float  %9.0g                 Change in Share of housing units that have 3 or more bedrooms 2000-1990
group1          float  %9.0g                 equals 1 if monitor is in-attainment and county is in-attainment
group2          float  %9.0g                 equals 1 if monitor is in-attainment and county is out-of-attainment
group3          float  %9.0g                 equals 1 if monitor is out-of-attainment
share_black_~80 float  %9.0g                 Change in share of population that is black 1990-1980
pop_dif_80      float  %9.0g                 Change in population density 1990-1980
total_housin~80 float  %9.0g                 Change in total housing units 1990-1980
ln_avg_fam_i~80 float  %9.0g                 Change in log of average family income 1990-1980
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Contains data from BentoFreedmanLang_RESTAT_5B.dta
  obs:         2,872
 vars:            58                          3 Sep 2014 09:48
 size:       666,304
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              storage  display     value
variable name   type   format      label      variable label
-------------------------------------------------------------------------------------------------------------------------------------
state_code      float  %10.0g                 numeric state identifier
county_code     float  %10.0g                 numeric county identifier
site_id         float  %10.0g                 site identifier of air quality monitor
cnty_instr      float  %9.0g                  county non-attainment instrument
pol_dif         float  %9.0g                  Change in PM10 concentration 2000-1990
mntr_instr      float  %9.0g                  monitor non-attainment instrument
factor          float  %9.0g                  CMHPI price index change 2000-1990
pop_dense_dif   float  %9.0g                  Change in Population density 2000-1990
total_housing~f float  %9.0g                  Change in Total number of housing units 2000-1990
share_units_o~f float  %9.0g                  Change in Share of owner housing units occupied 2000-1990
share_black_dif float  %9.0g                  Change in share of population that is black 2000-1990
share_latino_~f float  %9.0g                  Change in share of population that is latino 2000-1990
share_kids_dif  float  %9.0g                  Change in share of population that is under 5 years old 2000-1990
share_over_65~f float  %9.0g                  Change in share of population that is over 65 years old 2000-1990
share_foreign~f float  %9.0g                  Change in share of population that is foreign born 2000-1990
share_female_~f float  %9.0g                  Change in share of households with female head 2000-1990
share_same_ho~f float  %9.0g                  Change in share of households living in same house as 5 years ago 2000-1990
share_unemplo~f float  %9.0g                  Change in Share of population that is unemployed 2000-1990
share_manuf_e~f float  %9.0g                  Change in share of population employed in manufacturing 2000-1990
share_poor_dif  float  %9.0g                  Change in share of population in poverty 2000-1990
share_public_~f float  %9.0g                  Change in share of population receiving public assistance 2000-1990
ln_med_fam_in~f float  %9.0g                  Change in log of family income 2000-1990
ln_median_hou~f float  %9.0g                  Change in log median house value 2000-1990
share_edu_les~f float  %9.0g                  Change in share of population with less than high school degree 2000-1990
share_edu_16p~f float  %9.0g                  Change in share of population with college degree or more 2000-1990
share_heat_co~f float  %9.0g                  Change in share of housing units using coal for heat 2000-1990
share_heat_wo~f float  %9.0g                  Change in share of housing units using wood for heat 2000-1990
share_kitchen~f float  %9.0g                  Change in share of housing units without a kitchen 2000-1990
share_plumbin~f float  %9.0g                  Change in share of housing units with full plumbing 2000-1990
share_occ_own~f float  %9.0g                  Change in Share of housing units that are owner occupied 2000-1990
shar~10_own_dif float  %9.0g                  Change in Share of owner housing units that are between 5 and 10 years old 2000-
shar~20_own_dif float  %9.0g                  Change in Share of owner housing units that are between 10 and 20 years old 2000
shar~30_own_dif float  %9.0g                  Change in Share of owner housing units that are between 20 and 30 years old 2000
shar~40_own_dif float  %9.0g                  Change in Share of owner housing units that are between 30 and 40 years old 2000
shar~50_own_dif float  %9.0g                  Change in Share of owner housing units that are between 40 and 50 years old 2000
share~s_own_dif float  %9.0g                  Change in Share of owner housing units that are more than 50 years old 2000-1990
shar~10_rnt_dif float  %9.0g                  Change in Share of rental housing units that are between 5 and 10 years old 2000
shar~20_rnt_dif float  %9.0g                  Change in Share of rental housing units that are between 10 and 20 years old 200
shar~30_rnt_dif float  %9.0g                  Change in Share of rental housing units that are between 20 and 30 years old 200
shar~40_rnt_dif float  %9.0g                  Change in Share of rental housing units that are between 30 and 40 years old 200
shar~50_rnt_dif float  %9.0g                  Change in Share of rental housing units that are between 40 and 50 years old 200
share~s_rnt_dif float  %9.0g                  Change in Share of rental housing units that are more than 50 years old 2000-199
share~d_own_dif float  %9.0g                  Change in Share of owner housing units that are single and detached 2000-1990
share~a_own_dif float  %9.0g                  Change in Share of owner housing units that are single attached units 2000-1990
share_mob~n_dif float  %9.0g                  Change in Share of owner housing units that are mobile homes 2000-1990
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share~d_rnt_dif float  %9.0g                 Change in Share of rental housing units that are detached units 2000-1990
share~a_rnt_dif float  %9.0g                 Change in Share of rental housing units that are attached units 2000-1990
share_mob~t_dif float  %9.0g                 Change in Share of rental housing units that are mobile homes 2000-1990
share_bdrm2_r~f float  %9.0g                 Change in Share of rental housing units with 2 bedrooms 2000-1990
share_bdrm3_r~f float  %9.0g                 Change in Share of rental housing units with 3 bedrooms 2000-1990
share_bdrm4_r~f float  %9.0g                 Change in Share of rental housing units with 4 bedrooms 2000-1990
share_bdrm5_r~f float  %9.0g                 Change in Share of rental housing units with 5 or more bedrooms 2000-1990
share_bdrm2_o~f float  %9.0g                 Change in Share of owner housing units with 2 bedrooms 2000-1990
share_bdrm3_o~f float  %9.0g                 Change in Share of owner housing units with 3 bedrooms 2000-1990
share_bdrm4_o~f float  %9.0g                 Change in Share of owner housing units with 4 bedrooms 2000-1990
share_bdrm5_o~f float  %9.0g                 Change in Share of owner housing units with 5 or more bedrooms 2000-1990
fips2           float  %9.0g                 FIPS code
ring            float  %9.0g                 1 is 0-1 miles, 3 is 1-3 miles, 5 is 3-5 miles, 10 is 5-10 miles, 20 is 10-20 mi
-------------------------------------------------------------------------------------------------------------------------------
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```
Contains data from BentoFreedmanLang_RESTAT_FIG1.dta
  obs:            33
 vars:             4                          4 Sep 2014 14:24
 size:           462
-------------------------------------------------------------------------------------------------------------------------------
              storage  display     value
variable name   type   format      label      variable label
-------------------------------------------------------------------------------------------------------------------------------
year            int    %8.0g                  year
cnty_instr      float  %9.0g                  county non-attainment instrument
mntr_instr      float  %9.0g                  monitor non-attainment instrument
pm              float  %9.0g                  PM10 annual concentration
-------------------------------------------------------------------------------------------------------------------------------
```

```
Contains data from BentoFreedmanLang_RESTAT_FIG2_3.dta
  obs:        22,926
 vars:            14                          3 Sep 2014 09:46
 size:     1,444,338
-------------------------------------------------------------------------------------------------------------------------------
              storage  display     value
variable name   type   format      label      variable label
-------------------------------------------------------------------------------------------------------------------------------
geo2000         str11  %11s                   Geolytics tract identifier
median_rent_90  float  %9.0g                  median monthly rent 1990
share_occ_ow~90 float  %9.0g                  share of housing units that are owner occupied
share_white_90  float  %9.0g                  Share of population that is white 1990
share_edu_16~90 float  %9.0g                  Share of population with college degree or more 1990
state_code      float  %8.0g                  numeric state identifier
county_code     float  %8.0g                  numeric county identifer
site_id         float  %8.0g                  site identifier of air quality monitor
dist            float  %9.0g                  distance of tract centroid to air quality monitor in miles
house_90        float  %9.0g                  median house price 1990
income_90       float  %9.0g                  median household income 1990
unemploy_90     float  %9.0g                  Share of population that is unemployed 1990
dense_90        float  %9.0g                  population density 1990
prop_wtp        float  %9.0g                  Proportional willingness to pay
-------------------------------------------------------------------------------------------------------------------------------
```