

```
1  *** Data Do File
2
3
4  *** ELECTIONS DATA: PRESIDENTIAL ELECTIONS
5  *** source:
   https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910
   /DVN/DGUMFI
6
7  *** it's in .Rdata format, so I downloaded R and changed the format
8  ***** R Code:
9  ***** load('/Users/karianna/Desktop/Econ
   Thesis/Stata/Downloaded Data/Political Data as Downloaded
   (R)/County_Level_US_Elections_Data/dataverse_shareable_presidential_
   county_returns_1868_2020.Rdata')
10 ***** install.packages("haven")
11 *****
   names(pres_elections_release)[names(pres_elections_release) ==
   "pres_raw_county_vote_totals_two_party"] <-
   "pres_raw_vote_totals_2_party"
12 ***** library(haven)
13 ***** write_dta(pres_elections_release,
   "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
   Data/Political Data in Stata Form/pres_elections_original.dta")
14
15 *** import into Stata
16
17 use "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
   Data/Political Data in Stata Form/pres_elections_original.dta",
   clear
18 keep if state == "IA"
19 keep if election_year >= 1980
20 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Saved Into Stata"
21 save pres_elections.dta, replace
22
23 *** ELECTIONS DATA: GUBERNATORIAL ELECTIONS
24 *** source:
   https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910
   /DVN/DGUMFI
25
```

```
25
26 *** it's in .Rdata format, so I downloaded R and changed the format
27 ***** R Code:
28 ***** load('/Users/karianna/Desktop/Econ
Thesis/Stata/Downloaded Data/Political Data as Downloaded
(R)/County_Level_US_Elections_Data/dataverse_shareable_gubernatorial
_county_returns_1865_2020.Rdata')
29 ***** names(gov_elections_release)[names(gov_elections_release)
== "gov_raw_county_vote_totals_two_party"] <-
"gov_raw_vote_totals_2_party"
30 ***** library(haven)
31 ***** write_dta(gov_elections_release,
"/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
Data/Political Data in Stata Form/gov_elections_original.dta")
32
33 *** import into Stata
34
35 use "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
Data/Political Data in Stata Form/gov_elections_original.dta", clear
36 keep if state == "IA"
37 keep if election_year >= 1980
38 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Saved Into Stata"
39 save gov_elections.dta, replace
40
41 *** ELECTIONS DATA: SENATE ELECTIONS
42 *** source:
https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910
/DVN/DGUMFI
43
44 *** it's in .Rdata format, so I downloaded R and changed the format
45 ***** R Code:
46 ***** load('/Users/karianna/Desktop/Econ
Thesis/Stata/Downloaded Data/Political Data as Downloaded
(R)/County_Level_US_Elections_Data/dataverse_shareable_us_senate_cou
nty_returns_1908_2020.Rdata')
```

```

(R)/County_Level_US_Elections_Data/dataverse_shareable_us_senate_cou
nty_returns_1908_2020.Rdata')
47 *****
names(senate_elections_release)[names(senate_elections_release) ==
"senate_raw_county_vote_totals_two_party"] <-
"senate_raw_vote_totals_2_party"
48 ***** library(haven)
49 ***** write_dta(senate_elections_release,
"/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
Data/Political Data in Stata Form/senate_elections_original.dta")
50
51 *** import into Stata
52
53 use "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
Data/Political Data in Stata Form/senate_elections_original.dta",
clear
54 keep if state == "IA"
55 keep if election_year >= 1980
56 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Saved Into Stata"
57 save senate_elections.dta, replace
58
59
60
61
62 *** AGRICULTURAL DATA: Farmland & Cropland
63 *** source 1987:
https://agcensus.library.cornell.edu/wp-content/uploads/1987-Iowa-CH
APTER_2_County_Data-4-Table-05.pdf
64 *** source 1992:
https://agcensus.library.cornell.edu/wp-content/uploads/1992-Iowa-CH
APTER_2_County_Data-1570-Table-06.pdf
65 *** source 1997:
https://agcensus.library.cornell.edu/wp-content/uploads/1997-Iowa-CH
APTER_1_State_Data-1599-Table-08.pdf
66 *** source 2002:
https://agcensus.library.cornell.edu/wp-content/uploads/2002-Iowa-Co
untyData-Table-08.pdf
67 *** source 2007:
https://agcensus.library.cornell.edu/wp-content/uploads/2007-Iowa-st
19_2_008_008.pdf
68 *** source 2012:
https://agcensus.library.cornell.edu/wp-content/uploads/2012-Iowa-st
19_2_008_008.pdf

```

https://agcensus.library.cornell.edu/wp-content/uploads/2012-Iowa-st19_2_008_008.pdf

69 *** source 2017 & 2022:

https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Vol_ume_1,_Chapter_2_County_Level/Iowa/st19_2_008_008.pdf

70

71 *** I copied this data into Excel by hand

72

73 *** import data from Excel

74

75 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
Data/Agricultural Data"

76 import excel using "/Users/karianna/Desktop/Econ
Thesis/Stata/Downloaded Data/Agricultural Data/Agricultural Land
Data.xlsx", sheet("1987") firstrow clear
77 save agriculture_1987_temp.dta, replace

78

79 import excel using "/Users/karianna/Desktop/Econ
Thesis/Stata/Downloaded Data/Agricultural Data/Agricultural Land
Data.xlsx", sheet("1992") firstrow clear
80 save agriculture_1992_temp.dta, replace

81 import excel using "/Users/karianna/Desktop/Econ
Thesis/Stata/Downloaded Data/Agricultural Data/Agricultural Land
Data.xlsx", sheet("1997") firstrow clear
82 save agriculture_1997_temp.dta, replace

83 import excel using "/Users/karianna/Desktop/Econ
Thesis/Stata/Downloaded Data/Agricultural Data/Agricultural Land
Data.xlsx", sheet("2002") firstrow clear
84 save agriculture_2002_temp.dta, replace

85 import excel using "/Users/karianna/Desktop/Econ
Thesis/Stata/Downloaded Data/Agricultural Data/Agricultural Land
Data.xlsx", sheet("2007") firstrow clear
86 save agriculture_2007_temp.dta, replace

87 import excel using "/Users/karianna/Desktop/Econ
Thesis/Stata/Downloaded Data/Agricultural Data/Agricultural Land
Data.xlsx", sheet("2012") firstrow clear

```
Data.xlsx", sheet("2012") firstrow clear
88 save agriculture_2012_temp.dta, replace
89 import excel using "/Users/karianna/Desktop/Econ
Thesis/Stata/Downloaded Data/Agricultural Data/Agricultural Land
Data.xlsx", sheet("2017") firstrow clear
90 save agriculture_2017_temp.dta, replace
91 import excel using "/Users/karianna/Desktop/Econ
Thesis/Stata/Downloaded Data/Agricultural Data/Agricultural Land
Data.xlsx", sheet("2022") firstrow clear
92 save agriculture_2022_temp.dta, replace
93
94 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Saved Into Stata"
95 use "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
Data/Agricultural Data/agriculture_1987_temp.dta", clear
96 save agricultural_data.dta, replace
97 append using "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
Data/Agricultural Data/agriculture_1992_temp.dta"
98 append using "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
Data/Agricultural Data/agriculture_1997_temp.dta"
99 append using "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
Data/Agricultural Data/agriculture_2002_temp.dta"
100 append using "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
Data/Agricultural Data/agriculture_2007_temp.dta"
101 append using "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
Data/Agricultural Data/agriculture_2012_temp.dta"
102 append using "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
Data/Agricultural Data/agriculture_2017_temp.dta"
103 append using "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
Data/Agricultural Data/agriculture_2022_temp.dta"
104 save agricultural_data.dta, replace
105
106 *** add fips codes
```

```
106 *** add fips codes
107 rename Year year
108 rename County county
109 replace county = "Audubon" if county == "Audobon"
110 replace county = "Carroll" if county == "Caroll"
111
112 gen fips_code = .
113 replace fips_code = 19001 if county == "Adair"
114 replace fips_code = 19003 if county == "Adams"
115 replace fips_code = 19005 if county == "Allamakee"
116 replace fips_code = 19007 if county == "Appanoose"
117 replace fips_code = 19009 if county == "Audubon"
118 replace fips_code = 19011 if county == "Benton"
119 replace fips_code = 19013 if county == "Black Hawk"
120 replace fips_code = 19015 if county == "Boone"
121 replace fips_code = 19017 if county == "Bremer"
122 replace fips_code = 19019 if county == "Buchanan"
123 replace fips_code = 19021 if county == "Buena Vista"
124 replace fips_code = 19023 if county == "Butler"
125 replace fips_code = 19025 if county == "Calhoun"
126 replace fips_code = 19027 if county == "Carroll"
127 replace fips_code = 19029 if county == "Cass"
128 replace fips_code = 19031 if county == "Cedar"
129 replace fips_code = 19033 if county == "Cerro Gordo"
130 replace fips_code = 19035 if county == "Cherokee"
131 replace fips_code = 19037 if county == "Chickasaw"
132 replace fips_code = 19039 if county == "Clarke"
133 replace fips_code = 19041 if county == "Clay"
134 replace fips_code = 19043 if county == "Clayton"
135 replace fips_code = 19045 if county == "Clinton"
136 replace fips_code = 19047 if county == "Crawford"
137 replace fips_code = 19049 if county == "Dallas"
138 replace fips_code = 19051 if county == "Davis"
139 replace fips_code = 19053 if county == "Decatur"
140 replace fips_code = 19055 if county == "Delaware"
141 replace fips_code = 19057 if county == "Des Moines"
142 replace fips_code = 19059 if county == "Dickinson"
143 replace fips_code = 19061 if county == "Dubuque"
144 replace fips_code = 19063 if county == "Emmet"
145 replace fips_code = 19065 if county == "Fayette"
146 replace fips_code = 19067 if county == "Floyd"
147 replace fips_code = 19069 if county == "Franklin"
148 replace fips_code = 19071 if county == "Fremont"
```

```
148 replace fips_code = 19071 if county == "Fremont"
149 replace fips_code = 19073 if county == "Greene"
150 replace fips_code = 19075 if county == "Grundy"
151 replace fips_code = 19077 if county == "Guthrie"
152 replace fips_code = 19079 if county == "Hamilton"
153 replace fips_code = 19081 if county == "Hancock"
154 replace fips_code = 19083 if county == "Hardin"
155 replace fips_code = 19085 if county == "Harrison"
156 replace fips_code = 19087 if county == "Henry"
157 replace fips_code = 19089 if county == "Howard"
158 replace fips_code = 19091 if county == "Humboldt"
159 replace fips_code = 19093 if county == "Ida"
160 replace fips_code = 19095 if county == "Iowa"
161 replace fips_code = 19097 if county == "Jackson"
162 replace fips_code = 19099 if county == "Jasper"
163 replace fips_code = 19101 if county == "Jefferson"
164 replace fips_code = 19103 if county == "Johnson"
165 replace fips_code = 19105 if county == "Jones"
166 replace fips_code = 19107 if county == "Keokuk"
167 replace fips_code = 19109 if county == "Kossuth"
168 replace fips_code = 19111 if county == "Lee"
169 replace fips_code = 19113 if county == "Linn"
170 replace fips_code = 19115 if county == "Louisa"
171 replace fips_code = 19117 if county == "Lucas"
172 replace fips_code = 19119 if county == "Lyon"
173 replace fips_code = 19121 if county == "Madison"
174 replace fips_code = 19123 if county == "Mahaska"
175 replace fips_code = 19125 if county == "Marion"
176 replace fips_code = 19127 if county == "Marshall"
177 replace fips_code = 19129 if county == "Mills"
178 replace fips_code = 19131 if county == "Mitchell"
179 replace fips_code = 19133 if county == "Monona"
180 replace fips_code = 19135 if county == "Monroe"
181 replace fips_code = 19137 if county == "Montgomery"
182 replace fips_code = 19139 if county == "Muscatine"
183 replace fips_code = 19141 if county == "O'Brien"
184 replace fips_code = 19143 if county == "Osceola"
185 replace fips_code = 19145 if county == "Page"
186 replace fips_code = 19147 if county == "Palo Alto"
187 replace fips_code = 19149 if county == "Plymouth"
188 replace fips_code = 19151 if county == "Pocahontas"
189 replace fips_code = 19153 if county == "Polk"
190 replace fips_code = 19155 if county == "Pottawattamie"
```

```
190 replace fips_code = 19155 if county == "Pottawattamie"
191 replace fips_code = 19157 if county == "Poweshiek"
192 replace fips_code = 19159 if county == "Ringgold"
193 replace fips_code = 19161 if county == "Sac"
194 replace fips_code = 19163 if county == "Scott"
195 replace fips_code = 19165 if county == "Shelby"
196 replace fips_code = 19167 if county == "Sioux"
197 replace fips_code = 19169 if county == "Story"
198 replace fips_code = 19171 if county == "Tama"
199 replace fips_code = 19173 if county == "Taylor"
200 replace fips_code = 19175 if county == "Union"
201 replace fips_code = 19177 if county == "Van Buren"
202 replace fips_code = 19179 if county == "Wapello"
203 replace fips_code = 19181 if county == "Warren"
204 replace fips_code = 19183 if county == "Washington"
205 replace fips_code = 19185 if county == "Wayne"
206 replace fips_code = 19187 if county == "Webster"
207 replace fips_code = 19189 if county == "Winnebago"
208 replace fips_code = 19191 if county == "Winneshek"
209 replace fips_code = 19193 if county == "Woodbury"
210 replace fips_code = 19195 if county == "Worth"
211 replace fips_code = 19197 if county == "Wright"
212 save agricultural_data.dta, replace
213
214
215
216 *** DEMOGRAPHIC DATA
217 *** 2020-2023 source (AllData): https://wonder.cdc.gov/
218 *** 1990-2020 source (AllData): https://wonder.cdc.gov/
219
220 *** import excel from Jeff
221 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
Data/Demographics"
222 import excel "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
Data/Demographics/demographics_1990_2023_jeff.xlsx", sheet(
"Bridged-Race Population Estimats") firstrow clear
223
224 drop county
225 rename total total_pop
226 rename code fips_code
227 gen percent_female = female / total_pop
228 gen percent_Hispanic = Hispanic / total_pop
```

```
228 gen percent_Hispanic = Hispanic / total_pop
229 gen percent_White = White / total_pop
230 gen percent_15_24 = age15_24 / total_pop
231 gen percent_25_64 = age25_64 / total_pop
232 gen percent_65p = age65p / total_pop
233
234 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Saved into Stata"
235 save demographics, replace
236
237 *** COMMISSIONED TURBINE DATA
238 *** source:
239
240 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Saved Into Stata"
241 import delimited "/Users/karianna/Desktop/Econ
Thesis/Stata/Downloaded Data/USWTDB
Commissioned/uswtodb_v7_2_20241120.csv", clear
242 keep if t_state == "IA"
243 *** fix projects with no year attached
244 drop if t_county == "Tama County" & p_year == .
245 *** case_id 3085854 is part of Storm Lake II project from 1999,
turbine is clearly in a row with other turbines from that project
246 replace p_year = 1999 if case_id == 3085854
247 replace p_name = "Storm Lake II" if case_id == 3085854
248 *** case_id 3131500 is on top of another turbine in the same place
(case_id 3131987)
249 drop if case_id == 3131500
250 *** case_id 3108637 is part of Richland Project from 2020
251 replace p_year = 2020 if case_id == 3108637
252 replace p_name = "Richland" if case_id == 3108637
253 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Saved Into
Stata/Turbine Temp"
254 save uswtodb_commissioned_uncollapsed, replace
255
256 *** collapse commissioned turbine data
257 save uswtodb_commissioned_collapsed.dta, replace
258 egen n_unique = tag(t_county p_name)
259 collapse (count) case_id (sum) n_unique, by (t_fips p_year)
260 rename n_unique projects
261 rename case_id commissioned_count
```

```
261 rename case_id commissioned_count
262 rename t_fips fips_code
263 rename p_year year
264 save uswtodb_commissioned_collapsed.dta, replace
265
266
267
268
269 *** DECOMMISSIONED TURBINE DATA
270 *** source:
271
272 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Saved Into
Stata/Turbine Temp"
273 import delimited "/Users/karianna/Desktop/Econ
Thesis/Stata/Downloaded Data/USWTDB_decomissioned_fips.csv", clear
274 keep if statefp == 19
275 rename name county
276 replace county = county + " County"
277 replace statefp = 19000
278 gen fips_code = statefp + countyfp
279 *** fix projects with no commission year attached
280 *** case_id 3084027 is part a big project all decommissioned at
once
281 replace p_year = 1999 if case_id == 3084027
282 replace p_name = "Cerro Gordo/Hawkeye Power/Clear Lake" if case_id
== 3084027
283 *** case_id 3072782 has no turbines around it that were standing
in 2018 when it was decommissioned, so I am taking it out of the
dataset
284 drop if case_id == 3072782
285 *** case_id 3007110 is in Scott County, but there are no
other/have been no turbines in Scott County
286 drop if case_id == 3007110
287 *** fix projects with no decommission year attached
288 *** case_id 3074453 is part of Cerro Gordo/Hawkeye Power/Clear
Lake project
289 replace d_year = 2020 if case_id == 3074453
290 save uswtodb_decommissioned_uncollapsed, replace
291
292
293 *** collapse decommissioned turbine data
294 save uswtodb_decommissioned_collapsed_p_year, replace
```

```
294 save uswtdb_decommissioned_collapsed_p_year, replace
295 save uswtdb_decommissioned_collapsed_d_year, replace
296
297 ***** collect the building years for these turbines
298 use uswtdb_decommissioned_collapsed_p_year
299 collapse (count) case_id, by (fips_code p_year)
300 rename case_id commissioned_count_d
301 rename p_year year
302 save uswtdb_decommissioned_collapsed_p_year, replace
303
304 ***** collect the decommission years for these turbines
305 use uswtdb_decommissioned_collapsed_d_year
306 collapse (count) case_id, by (fips_code d_year)
307 rename case_id decommissioned_count
308 rename d_year year
309 save uswtdb_decommissioned_collapsed_d_year, replace
310
311
312 *** ADD TOGETHER COMMISSIONED AND DECOMMISSIONED TURBINES
313
314 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Saved Into
Stata/Turbine Temp"
315 use uswtdb_commissioned_collapsed
316 destring fips_code, replace
317 merge 1:1 year fips_code using
uswtdb_decommissioned_collapsed_p_year
318 drop _merge
319 merge 1:1 year fips_code using
uswtdb_decommissioned_collapsed_d_year
320 drop _merge
321 replace commissioned_count = 0 if commissioned_count == .
322 replace commissioned_count_d = 0 if commissioned_count_d == .
323 replace decommissioned_count = 0 if decommissioned_count == .
324 gen new_turbine_count = commissioned_count + commissioned_count_d
325 *** fix projects
326 replace projects = 0 if projects == .
327 replace projects = 1 if fips_code == 19169 & year == 1993
328 replace projects = 1 if fips_code == 19169 & year == 1994
329 replace projects = 1 if fips_code == 19169 & year == 1995
330 *** total turbine count has to be calculated when I have an
observation for every year
```

```
330 *** total turbine count has to be calculated when I have an
    observation for every year
331 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Saved Into Stata"
332 save uswtodb_data.dta, replace
333
334
335
336
337 *** BLS UNEMPLOYMENT DATA
338 *** source: https://data.bls.gov/multi-screen?survey=la
339
340 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Saved Into Stata"
341 import excel "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
    Data/BLS LAUS Iowa.xlsx", firstrow clear
342 reshape long Year_, i(County) j(Year)
343 rename Year year
344 rename Year_ bls_unemp
345 rename County fips_code
346 replace fips_code = substr(fips_code, 6, 5)
347 destring fips_code, replace
348 save bls_unemp.dta, replace
349
350
351
352 *** BEA GDP DATA
353 *** source (real gdp in chained 2017 dollars):
    https://apps.bea.gov/regional/downloadzip.htm
354
355 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Saved Into Stata"
356 import delimited "/Users/karianna/Desktop/Econ
    Thesis/Stata/Downloaded
    Data/bea_real_gdp_chained_2017/CAGDP9_IA_2001_2023.csv", clear
357 save bea_real_gdp.dta, replace
358 keep if description == "All industry total "
359 drop if geoname == "Iowa"
360 drop region tablename linecode industryclassification description
    unit geoname
361 rename v9 year_2001
```

```
361 rename v9 year_2001
362 rename v10 year_2002
363 rename v11 year_2003
364 rename v12 year_2004
365 rename v13 year_2005
366 rename v14 year_2006
367 rename v15 year_2007
368 rename v16 year_2008
369 rename v17 year_2009
370 rename v18 year_2010
371 rename v19 year_2011
372 rename v20 year_2012
373 rename v21 year_2013
374 rename v22 year_2014
375 rename v23 year_2015
376 rename v24 year_2016
377 rename v25 year_2017
378 rename v26 year_2018
379 rename v27 year_2019
380 rename v28 year_2020
381 rename v29 year_2021
382 rename v30 year_2022
383 rename v31 year_2023
384 rename geofips fips_code
385 replace fips_code = substr(fips_code, 1, 3)
386 destring fips_code year_2001 year_2002 year_2003 year_2004
year_2005 year_2006 year_2007 year_2008 year_2009 year_2010
year_2011 year_2012 year_2013 year_2014 year_2015 year_2016
year_2017 year_2018 year_2019 year_2020 year_2021 year_2022
year_2023, replace
387
388 reshape long year_, i(fips_code) j(year)
389 rename year_ real_gdp
390 label variable real_gdp "chained 2017 dollars"
391 save bea_real_gdp.dta, replace
392
393 *** BEA PERSONAL INCOME DATA
394 *** source: https://apps.bea.gov/regional/downloadzip.htm
395
396 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Saved Into Stata/BEA
Temp"
397 import delimited "/Users/karianna/Desktop/Econ
Thesis/Stata/Downloaded Data/CAINC4_IA_1969_2023.csv", clear
```

```
Thesis/Stata/Downloaded Data/CAINC4_IA_1969_2023.csv", clear
398 generate unique_id = _n
399 reshape long year, i(unique_id) j(year_)
400 rename year value
401
402 drop if year < 1990
403 drop unique_id geoname region tablename linecode
   industryclassification
404 rename year_ year
405 rename geofips fips_code
406 replace fips_code = substr(fips_code, 2, 5)
407 drop if fips_code == "ote: " | fips_code == "AINC4" | fips_code ==
   "ast u" | fips_code == ".S. B"
408 destring fips_code, replace
409 drop if fips_code == 19000
410 save bea_data, replace
411
412 save bea_temp, replace
413 keep if description == "Personal income (thousands of dollars) "
414 rename value personal_income
415 label variable personal_income "Thousands of Dollars"
416 drop description unit
417 save bea_temp, replace
418 save bea, replace
419
420 use bea_data
421 save bea_temp, replace
422 keep if description == "Nonfarm personal income 1/"
423 rename value nonfarm_personal_income
424 label variable nonfarm_personal_income "Thousands of Dollars"
425 drop description unit
426 save bea_temp, replace
427 use bea
428 merge 1:1 fips_code year using bea_temp
429 drop _merge
430 save bea, replace
431
432 use bea_data
433 save bea_temp, replace
434 keep if description == "Farm income 2/"
```

```
434 keep if description == "Farm income 2/"
435 rename value farm_income
436 label variable farm_income "Thousands of Dollars"
437 drop description unit
438 save bea_temp, replace
439 use bea
440 merge 1:1 fips_code year using bea_temp
441 drop _merge
442 save bea, replace
443
444 use bea_data
445 save bea_temp, replace
446 keep if description == "Population (persons) 3/"
447 rename value population
448 label variable population "Number of Persons"
449 drop description unit
450 save bea_temp, replace
451 use bea
452 merge 1:1 fips_code year using bea_temp
453 drop _merge
454 save bea, replace
455
456 use bea_data
457 save bea_temp, replace
458 keep if description == "Proprietors' income 9/"
459 rename value proprietors_income
460 label variable proprietors_income "Thousands of Dollars"
461 drop description unit
462 save bea_temp, replace
463 use bea
464 merge 1:1 fips_code year using bea_temp
465 drop _merge
466 save bea, replace
467
468 use bea_data
469 save bea_temp, replace
470 keep if description == " Farm proprietors' income "
471 rename value farm_proprietors_income
472 label variable farm_proprietors_income "Thousands of Dollars"
473 drop description unit
474 save bea_temp, replace
475 use bea
```

```
475 use bea
476 merge 1:1 fips_code year using bea_temp
477 drop _merge
478 save bea, replace
479
480 use bea_data
481 save bea_temp, replace
482 keep if description == " Nonfarm proprietors' income "
483 rename value nonfarm_proprietors_income
484 label variable nonfarm_proprietors_income "Thousands of Dollars"
485 drop description unit
486 save bea_temp, replace
487 use bea
488 merge 1:1 fips_code year using bea_temp
489 drop _merge
490 save bea, replace
491
492 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Saved Into Stata"
493 save bea_personal_income_nominal, replace
494
495
496 *** BLS CPI Calculator
497 *** source: https://data.bls.gov/pdq/SurveyOutputServlet
498
499 import excel "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded
Data/bls_cpi.xlsx", sheet("BLS Data Series") firstrow clear
500 rename Year year
501 save bls_cpi.dta, replace
502
503 *** Use CPI on BEA Personal income data
504
505 use bea_nominal.dta, clear
506 merge m:1 year using bls_cpi.dta
507 rename Annual bls_cpi
508 drop _merge
509
510 replace personal_income = personal_income * (245.12 / bls_cpi)
511 label var personal_income "Personal Income, Real 2017, Thousands
of Dollars"
```

```
511 label var personal_income "Personal Income, Real 2017, Thousands  
of Dollars"  
512  
513 replace nonfarm_personal_income = nonfarm_personal_income * (245.12  
/ bls_cpi)  
514 label var nonfarm_personal_income "Nonfarm Personal Income, Real  
2017, Thousands of Dollars"  
515  
516 replace farm_income = farm_income * (245.12 / bls_cpi)  
517 label var farm_income "Farm Income, Real 2017, Thousands of Dollars"  
518  
519 replace proprietors_income = proprietors_income * (245.12 / bls_cpi)  
520 label var proprietors_income "Proprietors' Income, Real 2017,  
Thousands of Dollars"  
521  
522 replace farm_proprietors_income = farm_proprietors_income * (245.12  
/ bls_cpi)  
523 label var farm_proprietors_income "Farm Proprietors' Income, Real  
2017, Thousands of Dollars"  
524  
525 replace nonfarm_proprietors_income = nonfarm_proprietors_income * (  
245.12 / bls_cpi)  
526 label var nonfarm_proprietors_income "Nonfarm Proprietors' Income,  
Real 2017, Thousands of Dollars"  
527  
528 save bea_personal_income_real.dta, replace  
529  
530 *** Merge The BEA Datasets together  
531  
532 use bls_personal_income_real  
533 merge 1:1 year fips_code using bea_real_gdp  
534 drop _merge  
535 drop if year == 2024  
536  
537 *** Augment by Population  
538  
539 gen rgdp_percap = real_gdp / population  
540 label var rgdp_percap "Real GDP Per Capita"  
541  
542 gen rpi_percap = personal_income / population  
543 label var rpi_percap "Real Personal Income Per Capita"  
544
```

```
544
545 gen rnfpi_percap = nonfarm_personal_income / population
546 label var rnfpi_percap "Real Nonfarm Personal Income Per Capita"
547
548 gen rfi_percap = farm_income / population
549 label var rfi_percap "Real Farm Income Per Capita"
550
551 gen rpropi_percap = proprietors_income / population
552 label var rpropi_percap "Real Proprietors Income Per Capita"
553
554 gen rfpropi_percap = farm_proprietors_income / population
555 label var rfpropi_percap "Real Farm Proprietors Income Per Capita"
556
557 gen rnfpropi_percap = nonfarm_proprietors_income / population
558 label var rnfpropi_percap "Real Proprietors Income Per Capita"
559
560 save bea_final, replace
561
562 *** County + fips_code database
563 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Saved Into Stata"
564 use bea_final
565 save county_fips_code_database, replace
566 keep fips_code
567 gen county = ""
568 replace county = "Adair County" if fips_code == 19001
569 replace county = "Adams County" if fips_code == 19003
570 replace county = "Allamakee County" if fips_code == 19005
571 replace county = "Appanoose County" if fips_code == 19007
572 replace county = "Audubon County" if fips_code == 19009
573 replace county = "Benton County" if fips_code == 19011
574 replace county = "Black Hawk County" if fips_code == 19013
```

```
574  replace county = "Black Hawk County"    if fips_code == 19013
575  replace county = "Boone County"          if fips_code == 19015
576  replace county = "Bremer County"         if fips_code == 19017
577  replace county = "Buchanan County"       if fips_code == 19019
578  replace county = "Buena Vista County"    if fips_code == 19021
579  replace county = "Butler County"         if fips_code == 19023
580  replace county = "Calhoun County"        if fips_code == 19025
581  replace county = "Carroll County"        if fips_code == 19027
582  replace county = "Cass County"           if fips_code == 19029
583  replace county = "Cedar County"          if fips_code == 19031
584  replace county = "Cerro Gordo County"    if fips_code == 19033
585  replace county = "Cherokee County"       if fips_code == 19035
586  replace county = "Chickasaw County"      if fips_code == 19037
587  replace county = "Clarke County"         if fips_code == 19039
588  replace county = "Clay County"           if fips_code == 19041
589  replace county = "Clayton County"        if fips_code == 19043
590  replace county = "Clinton County"       if fips_code == 19045
591  replace county = "Crawford County"      if fips_code == 19047
592  replace county = "Dallas County"         if fips_code == 19049
593  replace county = "Davis County"          if fips_code == 19051
594  replace county = "Decatur County"        if fips_code == 19053
595  replace county = "Delaware County"       if fips_code == 19055
```

```
595  replace county = "Delaware County"    if fips_code == 19055
596  replace county = "Des Moines County"   if fips_code == 19057
597  replace county = "Dickinson County"    if fips_code == 19059
598  replace county = "Dubuque County"      if fips_code == 19061
599  replace county = "Emmet County"        if fips_code == 19063
600  replace county = "Fayette County"      if fips_code == 19065
601  replace county = "Floyd County"        if fips_code == 19067
602  replace county = "Franklin County"     if fips_code == 19069
603  replace county = "Fremont County"      if fips_code == 19071
604  replace county = "Greene County"       if fips_code == 19073
605  replace county = "Grundy County"       if fips_code == 19075
606  replace county = "Guthrie County"      if fips_code == 19077
607  replace county = "Hamilton County"     if fips_code == 19079
608  replace county = "Hancock County"      if fips_code == 19081
609  replace county = "Hardin County"       if fips_code == 19083
610  replace county = "Harrison County"     if fips_code == 19085
611  replace county = "Henry County"        if fips_code == 19087
612  replace county = "Howard County"       if fips_code == 19089
613  replace county = "Humboldt County"     if fips_code == 19091
614  replace county = "Ida County"          if fips_code == 19093
615  replace county = "Iowa County"         if fips_code == 19095
616  replace county = "Jackson County"      if fips_code == 19097
```

616	replace county = "Jackson County"	if fips_code == 19097
617	replace county = "Jasper County"	if fips_code == 19099
618	replace county = "Jefferson County"	if fips_code == 19101
619	replace county = "Johnson County"	if fips_code == 19103
620	replace county = "Jones County"	if fips_code == 19105
621	replace county = "Keokuk County"	if fips_code == 19107
622	replace county = "Kossuth County"	if fips_code == 19109
623	replace county = "Lee County"	if fips_code == 19111
624	replace county = "Linn County"	if fips_code == 19113
625	replace county = "Louisa County"	if fips_code == 19115
626	replace county = "Lucas County"	if fips_code == 19117
627	replace county = "Lyon County"	if fips_code == 19119
628	replace county = "Madison County"	if fips_code == 19121
629	replace county = "Mahaska County"	if fips_code == 19123
630	replace county = "Marion County"	if fips_code == 19125
631	replace county = "Marshall County"	if fips_code == 19127
632	replace county = "Mills County"	if fips_code == 19129
633	replace county = "Mitchell County"	if fips_code == 19131
634	replace county = "Monona County"	if fips_code == 19133
635	replace county = "Monroe County"	if fips_code == 19135
636	replace county = "Montgomery County"	if fips_code == 19137
637	replace county = "Muscatine County"	if fips_code == 19139

```
637 replace county = "Muscatine County" if fips_code == 19139
638 replace county = "O'Brien County" if fips_code == 19141
639 replace county = "Osceola County" if fips_code == 19143
640 replace county = "Page County" if fips_code == 19145
641 replace county = "Palo Alto County" if fips_code == 19147
642 replace county = "Plymouth County" if fips_code == 19149
643 replace county = "Pocahontas County" if fips_code == 19151
644 replace county = "Polk County" if fips_code == 19153
645 replace county = "Pottawattamie County" if fips_code == 19155
646 replace county = "Poweshiek County" if fips_code == 19157
647 replace county = "Ringgold County" if fips_code == 19159
648 replace county = "Sac County" if fips_code == 19161
649 replace county = "Scott County" if fips_code == 19163
650 replace county = "Shelby County" if fips_code == 19165
651 replace county = "Sioux County" if fips_code == 19167
652 replace county = "Story County" if fips_code == 19169
653 replace county = "Tama County" if fips_code == 19171
654 replace county = "Taylor County" if fips_code == 19173
655 replace county = "Union County" if fips_code == 19175
656 replace county = "Van Buren County" if fips_code == 19177
657 replace county = "Wapello County" if fips_code == 19179
658 replace county = "Warren County" if fips_code == 19181
```

```
658 replace county = "Warren County"      if fips_code == 19181
659 replace county = "Washington County"   if fips_code == 19183
660 replace county = "Wayne County"         if fips_code == 19185
661 replace county = "Webster County"       if fips_code == 19187
662 replace county = "Winnebago County"     if fips_code == 19189
663 replace county = "Winneshiek County"    if fips_code == 19191
664 replace county = "Woodbury County"     if fips_code == 19193
665 replace county = "Worth County"        if fips_code == 19195
666 replace county = "Wright County"       if fips_code == 19197
667
668 duplicates report
669 duplicates drop
670 save county_fips_code_database, replace
671
672
673
674 *** WIND ORDINANCE DATA
675 *** source:
676     https://clearpath.org/wp-content/uploads/sites/44/2022/07/hawkeye-he
677     adwinds-report-large.pdf
678 *** source:
679     https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=122
680     7&context=sabin_climate_change
681 *** source:
682     https://data.usatoday.com/renewable-energy-production/iowa/6567/9991
683     4/
684 ***
685     https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=120
686     1&context=sabin_climate_change
687 *** https://scholarship.law.columbia.edu/sabin_climate_change/186/
688 ***
689     https://www.charlescitiypress.com/front/2024/10/10/court-rules-in-fav
690     or-of-wind-energy-company-in-worth-county-dispute/#:~:text=In%20Apri
691     l%202021%2C%20the%20Worth,specifically%20affected%20Worthwhile%20Win
692     d's%20project.
```

<https://www.charlescitypress.com/front/2024/10/10/court-rules-in-favor-of-wind-energy-company-in-worth-county-dispute/#:~:text=In%20April%202021%2C%20the%20Worth,specifically%20affected%20Worthwhile%20Wind's%20project.>

```

681 ***
    https://adaircounty.iowa.gov/files/county_ordinances/31A_an_amendment_to_ordinance_no_31_ndash_assessment_of_wind_energy_conversion_property_229.pdf
682 ***
    https://appanoosecounty.iowa.gov/wp-content/uploads/2020/01/ZoningOrdinanceaug2010.pdf
683
684
685 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded Data/Wind Ordinances"
686 import excel "/Users/karianna/Desktop/Econ Thesis/Stata/Downloaded Data/Wind Ordinances/wind_ordinances_2.xlsx", sheet("Sheet2")
    firstrow clear
687 save wind_ordinances.dta, replace
688 replace county = county + " County"
689 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Saved Into Stata"
690 merge m:1 county using county_fips_code_database
691 drop E F G H I K J _merge
692 replace year = 1990 if year == .
693 save wind_ordinances_1.dta, replace
694
695 *** START MERGING DATASETS
696
697 *** start with bls unemployment data, create final dataset
698 cd "/Users/karianna/Desktop/Econ Thesis/Stata/Saved Into Stata"
699 use bls_unemp
700 save final_1, replace
701
702 *** add turbine data
703 merge 1:1 fips_code year using uswtdb_data.dta
704 drop _merge
705 replace commissioned_count = 0 if commissioned_count == .
706 replace projects = 0 if projects == .
707 replace commissioned_count_d = 0 if commissioned_count_d == .

```

```
707  replace commissioned_count_d = 0 if commissioned_count_d == .
708  replace decommissioned_count = 0 if decommissioned_count == .
709  replace new_turbine_count = 0 if new_turbine_count == .
710
711  *** create indicator of any new turbines
712  gen any_new = 1 if new_turbine_count > 0
713  replace any_new = 0 if any_new == .
714
715  *** create cumulative count!
716  *** create temp variable to take decommissioned into account
717  gen temp_count = new_turbine_count - decommissioned_count
718  sort fips_code year
719  by fips_code (year): gen total_turbines = sum(temp_count)
720  drop temp_count
721  save final_1, replace
722
723  *** add agricultural data
724  use agricultural_data
725  save agricultural_temp
726  replace year = 1990 if year == 1987
727  save agricultural_temp, replace
728
729  use final_1
730  merge 1:1 fips_code year using agricultural_temp
731  drop county_merge
732  save final_1, replace
733
734  erase "agricultural_temp.dta"
735
736  *** fill in agricultural numbers
737  sort fips_code year
738  bysort fips_code (year): replace acres = acres[_n-1] if missing(
    acres)
739  bysort fips_code (year): replace farm_num = farm_num[_n-1] if
    missing(farm_num)
740  bysort fips_code (year): replace farm_land = farm_land[_n-1] if
    missing(farm_land)
741  bysort fips_code (year): replace crop_land = crop_land[_n-1] if
    missing(crop_land)
742  bysort fips_code (year): replace crop_land_harvested =
    crop_land_harvested[_n-1] if missing(crop_land_harvested)
```

```
742 bysort fips_code (year): replace crop_land_harvested =  
    crop_land_harvested[_n-1] if missing(crop_land_harvested)  
743 save final_1, replace  
744  
745 *** merge political data  
746 *** governor elections!!  
747 use gov_elections  
748 rename fips fips_code  
749 rename election_year year  
750 destring fips_code, replace  
751 save gov_elections, replace  
752  
753 use final_1  
754 merge 1:1 fips_code year using gov_elections  
755 drop election_id county_name state sfips office election_type  
    seat_status gov_raw_vote_totals_2_party dem_nominee rep_nominee  
    county_first_date county_end_date state_admission_date  
    original_county_name original_name_end_date _merge  
756 rename democratic_raw_votes gov_dem_votes  
757 rename republican_raw_votes gov_rep_votes  
758 rename raw_county_vote_totals gov_total_votes  
759  
760 sort fips_code year  
761 bysort fips_code (year): replace gov_dem_votes = gov_dem_votes[_n-1]  
    ] if missing(gov_dem_votes)  
762 bysort fips_code (year): replace gov_rep_votes = gov_rep_votes[_n-1]  
    ] if missing(gov_rep_votes)  
763 bysort fips_code (year): replace gov_total_votes = gov_total_votes[_n-1]  
    ] if missing(gov_total_votes)  
764  
765 save final_1, replace  
766  
767 *** presidential elections!!  
768 use pres_elections  
769 rename fips fips_code  
770 rename election_year year  
771 destring fips_code, replace  
772 save pres_elections, replace  
773  
774 save pres_temp  
775 replace year = 1990 if year == 1988  
776 save pres_temp, replace
```

```
776 save pres_temp, replace
777
778 use final_1
779 merge 1:1 fips_code year using pres_temp
780 drop county_name state sfips office election_type seat_status
dem_nominee rep_nominee pres_raw_vote_totals_2_party
county_first_date county_end_date state_admission_date
complete_county_cases original_county_name original_name_end_date
_merge
781 rename democratic_raw_votes pres_dem_votes
782 rename republican_raw_votes pres_rep_votes
783 rename raw_county_vote_totals pres_total_votes
784 save final_1, replace
785
786 erase "pres_temp.dta"
787
788 sort fips_code year
789 bysort fips_code (year): replace pres_dem_votes = pres_dem_votes[_n
-1] if missing(pres_dem_votes)
790 bysort fips_code (year): replace pres_rep_votes = pres_rep_votes[_n
-1] if missing(pres_rep_votes)
791 bysort fips_code (year): replace pres_total_votes =
pres_total_votes[_n-1] if missing(pres_total_votes)
792
793 save final_1, replace
794
795 *** senate elections!!
796 use senate_elections
797 rename fips fips_code
798 rename election_year year
799 destring fips_code, replace
800 save senate_elections, replace
801 sort fips_code year
802
803 use final_1
804 merge 1:1 fips_code year using senate_elections
805
806 gen senate_II_dem_votes = democratic_raw_votes if seat_class ==
"Class II"
807 gen senate_II_rep_votes = republican_raw_votes if seat_class ==
"Class II"
808 gen senate_II_total_votes = raw_county_vote_totals if seat_class ==
"Class II"
```