Statistics/Data analysis

```
      name:  <unnamed>
       log:  C:\Users\shree\OneDrive\Documents\UK 2023\Chicago\TaskLog.smcl
  log type:  smcl
 opened on:  14 Sep 2024, 15:22:50

1 .
2 . **Loading Data
3 . import delimited "C:\Users\shree\Downloads\RA_21_22.csv"
  (encoding automatically selected: ISO-8859-1)
  (11 vars, 47,776 obs)

4 .
5 . **Setting Survey Weights
6 . svyset [pw=weight]

  Sampling weights: weight
               VCE: linearized
      Single unit: missing
         Strata 1: <one>
   Sampling unit 1: <observations>
             FPC 1: <zero>

7 .
8 . ***TASK 1*************************************************************************
9 .
10. **BY RACE
11.
12. **Generating Variable for Total Wealth
13. gen wealth_total= asset_total- debt_total

14.
15. **Collapsing data to represent year and race wise medians
16. collapse (median) wealth_total [pw=weight], by(year race)

17.
18. **Panel Structure and plotting
19. encode race, gen(rac) //converting into numeric for panel setup

20.
21. xtset rac year // panel setup

  Panel variable: rac (strongly balanced)
   Time variable: year, 1989 to 2016, but with gaps
           Delta: 1 unit

22.
23. xtline wealth_total, overlay ///
  >        title("Panel A. Median Wealth by Race") ///
  >        ytitle("Median Wealth ($)") ///
  >        xtitle("Year") ///
  >        graphregion(color(white)) ///
  >        plotregion(margin(0 0 0 0)) ///
  >            saving(Race_Wealth)
  file Race_Wealth.gph saved

24.
25. clear

26.
```

```
27. ***BY EDUCATION
28.
29. **Loading Data
30. import delimited "C:\Users\shree\Downloads\RA_21_22.csv"
  (encoding automatically selected: ISO-8859-1)
  (11 vars, 47,776 obs)

31.
32. **Setting Survey Weights
33. svyset [pw=weight]

  Sampling weights: weight
               VCE: linearized
      Single unit: missing
         Strata 1: <one>
   Sampling unit 1: <observations>
           FPC 1: <zero>

34.
35. **Generating Variable for Total Wealth
36. gen wealth_total= asset_total-debt_total

37.
38. **Collapsing data to represent year and education wise medians
39. collapse (median) wealth_total [pw=weight], by(year education)

40.
41. **Panel Structure and plotting
42.
43. encode education, gen(edu) //converting into numeric for panel setup

44.
45. xtset edu year // panel setup

  Panel variable: edu (strongly balanced)
   Time variable: year, 1989 to 2016, but with gaps
           Delta: 1 unit

46.
47. xtline wealth_total, overlay ///
  >        title("Panel B. Median Wealth by Education") ///
  >        ytitle("Median Wealth ($)") ///
  >        xtitle("Year") ///
  >        graphregion(color(white)) ///
  >        plotregion(margin(0 0 0 0)) ///
  >            saving(Education_Wealth)
  file Education_Wealth.gph saved

48.
49. gr combine Race_Wealth.gph Education_Wealth.gph

50.
51. clear

52.
53. ******************************************************************************
54.
55. **TASK 2*********************************************************************
56.
57. **Loading Data
```

```
58. import delimited "C:\Users\shree\Downloads\RA_21_22.csv"
  (encoding automatically selected: ISO-8859-1)
  (11 vars, 47,776 obs)

59.
60. **Setting Survey Weights and filtering the data
61. svyset [pw=weight]

  Sampling weights: weight
               VCE: linearized
      Single unit: missing
         Strata 1: <one>
   Sampling unit 1: <observations>
             FPC 1: <zero>

62. encode race, gen(rac)

63. drop if rac!=2 & rac!=4
  (5,546 observations deleted)

64.
65. **Generating Variable for Total Wealth
66. gen wealth_housing= asset_housing-debt_housing

67.
68. **Collapsing data to represent year and race wise medians
69. collapse (median) wealth_housing [pw=weight], by(year rac)

70.
71. **Panel Structure and plotting
72.
73. xtset rac year // panel setup

  Panel variable: rac (strongly balanced)
   Time variable: year, 1989 to 2016, but with gaps
           Delta: 1 unit

74.
75. xtline wealth_housing, overlay ///
  >        title("Panel A. Median Housing Wealth by Race") ///
  >        ytitle("Median Housing Wealth ($)") ///
  >        xtitle("Year") ///
  >        graphregion(color(white)) ///
  >        plotregion(margin(0 0 0 0)) ///
  >            saving(Race_HSG_Wealth)
  file Race_HSG_Wealth.gph saved

76.
77. clear

78.
79. **THE MEDIAN HOUSING WEALTH OF BLACK FAMILIES APPEARS TO BE ZERO
80.
81. import delimited "C:\Users\shree\Downloads\RA_21_22.csv"
  (encoding automatically selected: ISO-8859-1)
  (11 vars, 47,776 obs)

82.
83. svyset [pw=weight]

  Sampling weights: weight
               VCE: linearized
      Single unit: missing
         Strata 1: <one>
   Sampling unit 1: <observations>
             FPC 1: <zero>
```

```
84. encode race, gen(rac)

85. drop if rac!=2 & rac!=4
  (5,546 observations deleted)

86. gen wealth_housing= asset_housing-debt_housing

87.
88. graph box wealth_housing [pweight = weight], over(rac) nooutsides medtype(marker) ti
  > tle("Panel B. Boxplot of Household Wealth") graphregion(color(white)) plotregion(mar
  > gin(0 0 0 0)) saving(box)
  file box.gph saved

89.
90. gr combine Race_HSG_Wealth.gph box.gph

91.
92. clear

93.
94. **Clearly, the median black household does not have any household assets
95.
96. ********************************************************************************
  > **
97.
98. **TASK 3************************************************************************
99.
100 **USING AGE 25 AND ABOVE
101
102 **Loading Data
103 import delimited "C:\Users\shree\Downloads\RA_21_22.csv"
  (encoding automatically selected: ISO-8859-1)
  (11 vars, 47,776 obs)

104
105 **Setting Survey Weights and filtering the data
106 svyset [pw=weight]

  Sampling weights: weight
               VCE: linearized
      Single unit: missing
         Strata 1: <one>
   Sampling unit 1: <observations>
             FPC 1: <zero>

107
108 **Generating Variable for Total Wealth
109 gen wealth_housing= asset_housing-debt_housing

110 gen wealth_total= asset_total-debt_total

111 keep if age>=25
  (1,864 observations deleted)

112 encode race, gen(rac)

113 drop if rac!=2 & rac!=4
  (5,200 observations deleted)

114
```

```
115 **Collapsing data to represent year and race wise medians
116 collapse (median) wealth_housing wealth_total [pw=weight], by(year rac)

117 xtset rac year

  Panel variable: rac (strongly balanced)
   Time variable: year, 1989 to 2016, but with gaps
           Delta: 1 unit

118
119 xtline wealth_housing, overlay ///
  >        title("Panel A. Median Housing Wealth by Race (Ages 25 and Above)") ///
  >        ytitle("Median Housing Wealth ($)") ///
  >        xtitle("Year") ///
  >        graphregion(color(white)) ///
  >        plotregion(margin(0 0 0 0)) ///
  >            saving(Race_HSG_Wealth_25)
  file Race_HSG_Wealth_25.gph saved

120
121            xtline wealth_total, overlay ///
  >        title("Panel B. Median Total Wealth by Race (Ages 25 and Above)") ///
  >        ytitle("Median Total Wealth ($)") ///
  >        xtitle("Year") ///
  >        graphregion(color(white)) ///
  >        plotregion(margin(0 0 0 0)) ///
  >            saving(Race_Wealth_25)
  file Race_Wealth_25.gph saved

122
123 drop if year!=2007 & year!=2016
  (16 observations deleted)

124 sort rac year

125
126 ** Calculating the dollar change in housing wealth
127 gen change_housing = wealth_housing - wealth_housing[_n-1] if year == 2016
  (2 missing values generated)

128
129 ** Calculating the dollar change in total wealth
130 gen change_total = wealth_total - wealth_total[_n-1] if year == 2016
  (2 missing values generated)

131
132 ** Calculating percentage change in housing wealth
133 gen pct_change_housing = ((wealth_housing - wealth_housing[_n-1]) / wealth_housing[_
  > n-1]) * 100 if year == 2016
  (2 missing values generated)

134
135 ** Calculating percentage change in total wealth
136 gen pct_change_total = ((wealth_total - wealth_total[_n-1]) / wealth_total[_n-1]) *
  > 100 if year == 2016
  (2 missing values generated)

137
138 list rac change_housing pct_change_housing change_total pct_change_total if year ==
  > 2016, noobs
```

rac	change_~g	pct_ch~g	change_~l	pct_cha~l
black	-6948.086	-100	-16324.65	-47.14748
white	-18851.13	-21.7051	-19768.66	-9.644722

```
139
140 clear

141
142
143
144 ///USING AGES 35 AND ABOVE************************************************
  >
145
146 **Loading Data
147 import delimited "C:\Users\shree\Downloads\RA_21_22.csv"
  (encoding automatically selected: ISO-8859-1)
  (11 vars, 47,776 obs)

148
149 **Setting Survey Weights and filtering the data
150 svyset [pw=weight]

  Sampling weights: weight
               VCE: linearized
      Single unit: missing
         Strata 1: <one>
   Sampling unit 1: <observations>
             FPC 1: <zero>

151
152 **Generating Variable for Total Wealth
153 gen wealth_housing= asset_housing-debt_housing

154 gen wealth_total= asset_total-debt_total

155 keep if age>=35
  (8,535 observations deleted)

156 encode race, gen(rac)

157 drop if rac!=2 & rac!=4
  (3,972 observations deleted)

158
159 **Collapsing data to represent year and race wise medians
160 collapse (median) wealth_housing wealth_total [pw=weight], by(year rac)

161 xtset rac year

  Panel variable: rac (strongly balanced)
   Time variable: year, 1989 to 2016, but with gaps
           Delta: 1 unit

162
163 xtline wealth_housing, overlay ///
  >        title("Panel C. Median Housing Wealth by Race (Ages 35 and Above)") ///
  >        ytitle("Median Housing Wealth ($)") ///
  >        xtitle("Year") ///
  >        graphregion(color(white)) ///
  >        plotregion(margin(0 0 0 0)) ///
  >            saving(Race_HSG_Wealth_35)
  file Race_HSG_Wealth_35.gph saved

164
```

```
165           xtline wealth_total, overlay ///
  >        title("Panel D. Median Total Wealth by Race (Ages 35 and Above)") ///
  >        ytitle("Median Total Wealth ($)") ///
  >        xtitle("Year") ///
  >        graphregion(color(white)) ///
  >        plotregion(margin(0 0 0 0)) ///
  >           saving(Race_Wealth_35)
  file Race_Wealth_35.gph saved

166
167 gr combine Race_HSG_Wealth_25.gph Race_Wealth_25.gph Race_HSG_Wealth_35.gph Race_Wea
  > lth_35.gph

168
169 drop if year!=2007 & year!=2016
  (16 observations deleted)

170 sort rac year

171
172 ** Calculating the dollar change in housing wealth
173 gen change_housing = wealth_housing - wealth_housing[_n-1] if year == 2016
  (2 missing values generated)

174
175 ** Calculating the dollar change in total wealth
176 gen change_total = wealth_total - wealth_total[_n-1] if year == 2016
  (2 missing values generated)

177
178 ** Calculating percentage change in housing wealth
179 gen pct_change_housing = ((wealth_housing - wealth_housing[_n-1]) / wealth_housing[_
  > n-1]) * 100 if year == 2016
  (2 missing values generated)

180
181 ** Calculating percentage change in total wealth
182 gen pct_change_total = ((wealth_total - wealth_total[_n-1]) / wealth_total[_n-1]) *
  > 100 if year == 2016
  (2 missing values generated)

183
184 list rac change_housing pct_change_housing change_total pct_change_total if year ==
  > 2016, noobs
```

rac	change_~g	pct_cha~g	change_~l	pct_cha~l
black	-13896.18	-100	-15701.89	-32.30716
white	-20379.37	-19.33905	-19734.41	-7.88889

```
185
186
187 clear

188
189 ********************************************************************************
  > ******
190
191 log close
       name:  <unnamed>
        log:  C:\Users\shree\OneDrive\Documents\UK 2023\Chicago\TaskLog.smcl
   log type:  smcl
  closed on:  14 Sep 2024, 15:23:06
```