Statistics/Data analysis

```
      name:  <unnamed>
       log:  E:\NYU Master\Semester 2\PADM-GP 2902 Regression and intro to econom
> trics\Final Project\Presentation Part Do File.smcl
  log type:  smcl
 opened on:  18 Apr 2022, 22:30:46

1 . use "$datadir\20220324-DataCleaning.dta"

2 .
3 . sum gdpcap

    Variable |        Obs        Mean    Std. dev.       Min        Max
-------------+---------------------------------------------------------
      gdpcap |        521    8722.309    13895.74   98.03187   102863.1

4 . return list

scalars:
                  r(N) =  521
              r(sum_w) =  521
               r(mean) =  8722.309087229782
                r(Var) =  193091685.6177301
                 r(sd) =  13895.74343522973
                r(min) =  98.03186798095703
                r(max) =  102863.09375
                r(sum) =  4544323.034446716

5 . replace gdpcap = r(mean) if gdpcap ==.
(10 real changes made)

6 . // replace missing values in gdpcap to their group mean (10 real changes made)
7 .
8 . sum frtl_rte

    Variable |        Obs        Mean    Std. dev.       Min        Max
-------------+---------------------------------------------------------
    frtl_rte |        531    3.365119    1.716845        .939      8.667

9 . return list

scalars:
                  r(N) =  531
              r(sum_w) =  531
               r(mean) =  3.365118922262317
                r(Var) =  2.947556780599
                 r(sd) =  1.716845007739196
                r(min) =  .9390000104904175
                r(max) =  8.666999816894531
                r(sum) =  1786.878147721291

10. replace frtl_rte = r(mean) if frtl_rte ==.
(0 real changes made)

11. // replace missing values in frtl_rte to their group mean (0 real changes made)
12.
13. sum lifeexp

    Variable |        Obs        Mean    Std. dev.       Min        Max
-------------+---------------------------------------------------------
     lifeexp |        531    67.15366    10.01457   32.61156   82.97805
```

```
14. return list

  scalars:
                  r(N) =  531
              r(sum_w) =  531
               r(mean) =  67.15365892974221
                r(Var) =  100.2916204406897
                 r(sd) =  10.01457040719619
               r(min) =  32.6115608215332
               r(max) =  82.97805023193359
               r(sum) =  35658.59289169312

15. replace lifeexp = r(mean) if lifeexp ==.
  (0 real changes made)

16. // replace missing values in lifeexp to their group mean (0 real changes made)
17.
18. sum co2_em

    Variable |        Obs        Mean    Std. dev.       Min        Max
-------------+---------------------------------------------------------
      co2_em |        505    4.605212    6.485877   .0181349   58.52217

19. return list

  scalars:
                  r(N) =  505
              r(sum_w) =  505
               r(mean) =  4.605212292503012
                r(Var) =  42.06659817517209
                 r(sd) =  6.485876823928441
               r(min) =  .0181349068880081
               r(max) =  58.52217102050781
               r(sum) =  2325.632207714021

20. replace co2_em = r(mean) if co2_em ==.
  (26 real changes made)

21. // replace missing values in co2_em to their group mean (26 real changes made)
22.
23. tabstat pop_grwth gdpcap frtl_rte lifeexp co2_em, stat(n mean sd min max q) col(stat
  > )

    Variable |         N      Mean        SD       Min       Max       p25       p50
  >      p75
-------------+----------------------------------------------------------------------
  ----------
   pop_grwth |       531  1.597279  1.360082 -2.096943  10.39837  .5846527  1.519073
  > 2.513898
      gdpcap |       531  8722.309  13764.03  98.03187  102863.1  762.8839  2506.185
  > 10227.75
    frtl_rte |       531  3.365119  1.716845      .939     8.667      1.92     2.837
  >    4.654
     lifeexp |       531  67.15366  10.01457  32.61156  82.97805  61.18732  69.67949
  > 74.60244
      co2_em |       531  4.605212  6.324789  .0181349  58.52217  .5982311  2.278387
  > 6.316496
-------------+----------------------------------------------------------------------
  ----------
```

```
24.
25. sum2docx pop_grwth gdpcap frtl_rte lifeexp co2_em using "$datadir\table1.docx", repl
  > ace stats(N mean sd min(%9.0g) max(%9.0g) p25(%9.0g) median(%9.0g) p75(%9.0g)) title
  > ("Descriptive Statistics")
  summary statistics have been written to file E:\NYU Master\Semester 2\PADM-GP 2902 Reg
  > ression and intro to econom trics\Final Project\table1.docx

26.
27. hist gdpcap, freq normal title("Distribuation of GDP Per Capita")
  (bin=23, start=98.031868, width=4468.0462)

28. graph export "$datadir\DistribuationGDP.png", replace
  file E:\NYU Master\Semester 2\PADM-GP 2902 Regression and intro to econom trics\Final
      Project\DistribuationGDP.png saved as PNG format

29.
30. hist co2_em, freq normal title("Distribuation of CO2 Emission")
  (bin=23, start=.01813491, width=2.5436537)

31. graph export "$datadir\DistribuationCO2.png", replace
  file E:\NYU Master\Semester 2\PADM-GP 2902 Regression and intro to econom trics\Final
      Project\DistribuationCO2.png saved as PNG format

32.
33. gen lg_gdpcap = log(gdpcap)

34. gen lg_co2_em = log(co2_em)

35. gen int_gdpco2 = log(gdpcap) * log(co2_em)

36.
37. hist lg_gdpcap, freq normal title("Distribuation of Log_GDP Per Capita")
  (bin=23, start=4.5852928, width=.30242874)

38. graph export "$datadir\DistribuationLogGDP.png", replace
  file E:\NYU Master\Semester 2\PADM-GP 2902 Regression and intro to econom trics\Final
      Project\DistribuationLogGDP.png saved as PNG format

39.
40. hist lg_co2_em, freq normal title("Distribuation of Log_CO2 Emission")
  (bin=23, start=-4.0099168, width=.35127488)

41. graph export "$datadir\DistribuationLogCO2.png", replace
  file E:\NYU Master\Semester 2\PADM-GP 2902 Regression and intro to econom trics\Final
      Project\DistribuationLogCO2.png saved as PNG format

42.
43. log close
       name:  <unnamed>
        log:  E:\NYU Master\Semester 2\PADM-GP 2902 Regression and intro to econom trics
  > \Final Project\Presentation Part Do File.smcl
    log type:  smcl
   closed on:  18 Apr 2022, 22:31:01
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