Statistics/Data analysis

```
{smcl}
{com}{sf}{ul off}{txt}{.-}
      name:  {res}<unnamed>
       {txt}log:  {res}C:\Users\Gadai Bulgac\Downloads\EconomicEnvironmental.smcl
  {txt}log type:  {res}smcl
 {txt}opened on:  {res}12 Jul 2024, 20:59:02
{txt}
{com}.
1 . gen loggdp = log(gdp)
{txt}(5 missing values generated)

{com}.
2 . xtile gdpquartile = gdp, nq(4)
{txt}
{com}.
3 . correlate environmental economic
{txt}(obs=174)

             {c |} enviro~l economic
{hline 13}{c +}{hline 18}
environmen~l {c |}{res}   1.0000
    {txt}economic {c |}{res}   0.6109   1.0000

{txt}
{com}. scatter environmental economic
{res}{txt}
{com}.
4 . correlate environmental gdp
{txt}(obs=176)

             {c |} enviro~l      gdp
{hline 13}{c +}{hline 18}
environmen~l {c |}{res}   1.0000
         {txt}gdp {c |}{res}   0.6408   1.0000

{txt}
{com}. scatter environmental gdp
{res}{txt}
{com}.
5 . correlate environmental loggdp
{txt}(obs=176)

             {c |} enviro~l   loggdp
{hline 13}{c +}{hline 18}
environmen~l {c |}{res}   1.0000
      {txt}loggdp {c |}{res}   0.7109   1.0000

{txt}
{com}. scatter environmental loggdp
{res}{txt}
{com}.
6 . correlate gdp economic
{txt}(obs=171)

             {c |}      gdp economic
{hline 13}{c +}{hline 18}
         gdp {c |}{res}   1.0000
    {txt}economic {c |}{res}   0.7110   1.0000

{txt}
{com}. scatter gdp economic
{res}{txt}
{com}.
```

```
7 . correlate loggdp economic
(obs=171)

             |   loggdp economic
-------------+------------------
      loggdp |   1.0000
    economic |   0.7584   1.0000


. scatter loggdp economic
.
8 . regress environmental economic

      Source |       SS           df       MS      Number of obs   =       174
-------------+------------------------------------   F(1, 172)       =    102.40
       Model |  9940.54333         1  9940.54333   Prob > F        =    0.0000
    Residual |   16696.29       172  97.0714537   R-squared       =    0.3732
-------------+------------------------------------   Adj R-squared   =    0.3695
       Total | 26636.8334       173  153.970135   Root MSE        =    9.8525

------------------------------------------------------------------------------
environmen~l | Coefficient  Std. err.      t    P>|t|     [95% confidence interval]
-------------+----------------------------------------------------------------
    economic |   .7314981   .0722859    10.12   0.000     .5888163    .8741798
       _cons |   -.5152611   4.375211    -0.12   0.906    -9.15128    8.120758
------------------------------------------------------------------------------
.
9 . regress environmental gdp

      Source |       SS           df       MS      Number of obs   =       176
-------------+------------------------------------   F(1, 174)       =    121.24
       Model |  11048.6439         1  11048.6439   Prob > F        =    0.0000
    Residual | 15856.8611       174  91.1313856   R-squared       =    0.4106
-------------+------------------------------------   Adj R-squared   =    0.4073
       Total |  26905.505       175  153.745743   Root MSE        =    9.5463

------------------------------------------------------------------------------
environmen~l | Coefficient  Std. err.      t    P>|t|     [95% confidence interval]
-------------+----------------------------------------------------------------
         gdp |   .0003434   .0000312    11.01   0.000     .0002818    .0004049
       _cons |   37.47999   .8828445    42.45   0.000     35.73753    39.22246
------------------------------------------------------------------------------
.
```

```
10. regress gdp economic

  {txt}      Source {c |}       SS           df       MS      Number of obs   ={res}
  >    171
  {txt}{hline 13}{c +}{hline 34}   F(1, 169)       = {res}   172.73
  {txt}       Model {c |} {res} 4.7097e+10         1  4.7097e+10   {txt}Prob > F
  > ={res}    0.0000
  {txt}    Residual {c |} {res} 4.6079e+10       169   272656801   {txt}R-squared
  > ={res}    0.5055
  {txt}{hline 13}{c +}{hline 34}   Adj R-squared   ={res}    0.5025
  {txt}       Total {c |} {res} 9.3176e+10       170   548095747   {txt}Root MSE
  > =   {res}  16512

  {txt}{hline 13}{c TT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
  {col 1}         gdp{col 14}{c |} Coefficient{col 26}  Std. err.{col 38}      t{col 46}
  >    P>|t|{col 54}     [95% con{col 67}f. interval]
  {hline 13}{c +}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
  {space 4}economic {c |}{col 14}{res}{space 2} 1754.068{col 26}{space 2} 133.4617{col 3
  > 7}{space 1}   13.14{col 46}{space 3}0.000{col 54}{space 4} 1490.601{col 67}{space 3}
  >  2017.534
  {txt}{space 7}_cons {c |}{col 14}{res}{space 2}-88683.12{col 26}{space 2} 8112.354{col
  >  37}{space 1}  -10.93{col 46}{space 3}0.000{col 54}{space 4}-104697.7{col 67}{space
  > 3}-72668.52
  {txt}{hline 13}{c BT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
  {res}{txt}
  {com}.
11. regress loggdp economic

  {txt}      Source {c |}       SS           df       MS      Number of obs   ={res}
  >    171
  {txt}{hline 13}{c +}{hline 34}   F(1, 169)       = {res}   228.77
  {txt}       Model {c |} {res} 196.459185         1  196.459185   {txt}Prob > F
  > ={res}    0.0000
  {txt}    Residual {c |} {res} 145.133322       169  .858777055   {txt}R-squared
  > ={res}    0.5751
  {txt}{hline 13}{c +}{hline 34}   Adj R-squared   ={res}    0.5726
  {txt}       Total {c |} {res} 341.592507       170  2.00936769   {txt}Root MSE
  > =   {res}  .9267

  {txt}{hline 13}{c TT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
  {col 1}      loggdp{col 14}{c |} Coefficient{col 26}  Std. err.{col 38}      t{col 46}
  >    P>|t|{col 54}     [95% con{col 67}f. interval]
  {hline 13}{c +}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
  {space 4}economic {c |}{col 14}{res}{space 2} .1132882{col 26}{space 2} .0074901{col 3
  > 7}{space 1}   15.13{col 46}{space 3}0.000{col 54}{space 4} .0985019{col 67}{space 3}
  >  .1280744
  {txt}{space 7}_cons {c |}{col 14}{res}{space 2} 2.020034{col 26}{space 2} .4552804{col
  >  37}{space 1}    4.44{col 46}{space 3}0.000{col 54}{space 4} 1.121265{col 67}{space
  > 3} 2.918803
  {txt}{hline 13}{c BT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
  {res}{txt}
  {com}.
12. regress environmental loggdp

  {txt}      Source {c |}       SS           df       MS      Number of obs   ={res}
  >    176
  {txt}{hline 13}{c +}{hline 34}   F(1, 174)       = {res}   177.74
  {txt}       Model {c |} {res} 13595.6864         1  13595.6864   {txt}Prob > F
  > ={res}    0.0000
  {txt}    Residual {c |} {res} 13309.8185       174  76.4932098   {txt}R-squared
  > ={res}    0.5053
  {txt}{hline 13}{c +}{hline 34}   Adj R-squared   ={res}    0.5025
  {txt}       Total {c |} {res}  26905.505       175  153.745743   {txt}Root MSE
  > =   {res}  8.746
```

```
{txt}{hline 13}{c TT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{col 1}environmen~l{col 14}{c |} Coefficient{col 26}  Std. err.{col 38}      t{col 46}
>    P>|t|{col 54}     [95% con{col 67}f. interval]
{hline 13}{c +}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{space 6}loggdp {c |}{col 14}{res}{space 2}  6.21736{col 26}{space 2} .4663552{col 37}
> {space 1}   13.33{col 46}{space 3}0.000{col 54}{space 4} 5.296918{col 67}{space 3} 7
> .137801
{txt}{space 7}_cons {c |}{col 14}{res}{space 2} -11.6755{col 26}{space 2} 4.162071{col
>  37}{space 1}   -2.81{col 46}{space 3}0.006{col 54}{space 4}-19.89014{col 67}{space
> 3}-3.460859
{txt}{hline 13}{c BT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{res}{txt}
{com}.
```

13. regress environmental economic gdp

```
{txt}      Source {c |}       SS           df       MS      Number of obs   ={res}
>    170
{txt}{hline 13}{c +}{hline 34}   F(2, 167)       = {res}    87.10
{txt}       Model {c |} {res} 13515.3375         2  6757.66877   {txt}Prob > F
> ={res}    0.0000
{txt}    Residual {c |} {res} 12956.4022       167  77.5832467   {txt}R-squared
> ={res}    0.5106
{txt}{hline 13}{c +}{hline 34}   Adj R-squared   ={res}    0.5047
{txt}       Total {c |} {res} 26471.7397       169  156.637513   {txt}Root MSE
> =   {res} 8.8081

{txt}{hline 13}{c TT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{col 1}environmen~l{col 14}{c |} Coefficient{col 26}  Std. err.{col 38}      t{col 46}
>    P>|t|{col 54}     [95% con{col 67}f. interval]
{hline 13}{c +}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{space 4}economic {c |}{col 14}{res}{space 2}  .573323{col 26}{space 2} .1013397{col 3
> 7}{space 1}    5.66{col 46}{space 3}0.000{col 54}{space 4} .3732511{col 67}{space 3}
>   .773395
{txt}{space 9}gdp {c |}{col 14}{res}{space 2} .0001788{col 26}{space 2} .0000411{col 3
> 7}{space 1}    4.35{col 46}{space 3}0.000{col 54}{space 4} .0000977{col 67}{space 3}
>    .00026
{txt}{space 7}_cons {c |}{col 14}{res}{space 2} 5.709496{col 26}{space 2} 5.656998{col
>  37}{space 1}    1.01{col 46}{space 3}0.314{col 54}{space 4}-5.458951{col 67}{space
> 3} 16.87794
{txt}{hline 13}{c BT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{res}{txt}
{com}.
```

14. regress environmental economic loggdp

```
{txt}      Source {c |}       SS           df       MS      Number of obs   ={res}
>    170
{txt}{hline 13}{c +}{hline 34}   F(2, 167)       = {res}   106.90
{txt}       Model {c |} {res} 14862.2588         2  7431.12942   {txt}Prob > F
> ={res}    0.0000
{txt}    Residual {c |} {res} 11609.4809       167  69.5178497   {txt}R-squared
> ={res}    0.5614
{txt}{hline 13}{c +}{hline 34}   Adj R-squared   ={res}    0.5562
{txt}       Total {c |} {res} 26471.7397       169  156.637513   {txt}Root MSE
> =   {res} 8.3377

{txt}{hline 13}{c TT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{col 1}environmen~l{col 14}{c |} Coefficient{col 26}  Std. err.{col 38}      t{col 46}
>    P>|t|{col 54}     [95% con{col 67}f. interval]
{hline 13}{c +}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{space 4}economic {c |}{col 14}{res}{space 2} .3878861{col 26}{space 2} .1034167{col 3
> 7}{space 1}    3.75{col 46}{space 3}0.000{col 54}{space 4} .1837135{col 67}{space 3}
>  .5920588
{txt}{space 6}loggdp {c |}{col 14}{res}{space 2} 4.406268{col 26}{space 2} .6923434{co
> l 37}{space 1}    6.36{col 46}{space 3}0.000{col 54}{space 4} 3.039394{col 67}{space
>  3} 5.773141
{txt}{space 7}_cons {c |}{col 14}{res}{space 2}-19.04916{col 26}{space 2} 4.328749{col
>  37}{space 1}   -4.40{col 46}{space 3}0.000{col 54}{space 4}-27.59529{col 67}{space
> 3}-10.50304
{txt}{hline 13}{c BT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{res}{txt}
{com}.
```

```
15. regress environmental economic gdpquartile

  {txt}      Source {c |}       SS           df       MS      Number of obs   ={res}
  >    170
  {txt}{hline 13}{c +}{hline 34}   F(2, 167)       = {res}   109.87
  {txt}       Model {c |} {res} 15040.6613         2  7520.33064   {txt}Prob > F
  > ={res}    0.0000
  {txt}    Residual {c |} {res} 11431.0785       167  68.4495716   {txt}R-squared
  > ={res}    0.5682
  {txt}{hline 13}{c +}{hline 34}   Adj R-squared   ={res}    0.5630
  {txt}       Total {c |} {res} 26471.7397       169  156.637513   {txt}Root MSE
  > =   {res} 8.2734

  {txt}{hline 13}{c TT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
  {col 1}environmen~l{col 14}{c |} Coefficient{col 26}  Std. err.{col 38}      t{col 46}
  >    P>|t|{col 54}     [95% con{col 67}f. interval]
  {hline 13}{c +}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
  {space 4}economic {c |}{col 14}{res}{space 2} .4226562{col 26}{space 2} .0969723{col 3
  > 7}{space 1}    4.36{col 46}{space 3}0.000{col 54}{space 4} .2312066{col 67}{space 3}
  >  .6141058
  {txt}{space 1}gdpquartile {c |}{col 14}{res}{space 2} 5.368158{col 26}{space 2} .81165
  > 83{col 37}{space 1}    6.61{col 46}{space 3}0.000{col 54}{space 4} 3.765724{col 67}{
  > space 3} 6.970591
  {txt}{space 7}_cons {c |}{col 14}{res}{space 2} 4.290824{col 26}{space 2}  4.61361{col
  >  37}{space 1}    0.93{col 46}{space 3}0.354{col 54}{space 4}-4.817692{col 67}{space
  > 3} 13.39934
  {txt}{hline 13}{c BT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
  {res}{txt}
  {com}.
16. regress environmental economic if gdpquartile == 1

  {txt}      Source {c |}       SS           df       MS      Number of obs   ={res}
  >     44
  {txt}{hline 13}{c +}{hline 34}   F(1, 42)        = {res}     0.00
  {txt}       Model {c |} {res} .000056365         1  .000056365   {txt}Prob > F
  > ={res}    0.9990
  {txt}    Residual {c |} {res} 1554.19162        42  37.0045623   {txt}R-squared
  > ={res}    0.0000
  {txt}{hline 13}{c +}{hline 34}   Adj R-squared   ={res}   -0.0238
  {txt}       Total {c |} {res} 1554.19167        43  36.1439924   {txt}Root MSE
  > =   {res} 6.0831

  {txt}{hline 13}{c TT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
  {col 1}environmen~l{col 14}{c |} Coefficient{col 26}  Std. err.{col 38}      t{col 46}
  >    P>|t|{col 54}     [95% con{col 67}f. interval]
  {hline 13}{c +}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
  {space 4}economic {c |}{col 14}{res}{space 2} .0002057{col 26}{space 2} .1666557{col 3
  > 7}{space 1}    0.00{col 46}{space 3}0.999{col 54}{space 4}-.3361192{col 67}{space 3}
  >  .3365306
  {txt}{space 7}_cons {c |}{col 14}{res}{space 2} 33.26885{col 26}{space 2} 8.715239{col
  >  37}{space 1}    3.82{col 46}{space 3}0.000{col 54}{space 4} 15.68078{col 67}{space
  > 3} 50.85691
  {txt}{hline 13}{c BT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
  {res}{txt}
  {com}. regress environmental economic if gdpquartile == 2

  {txt}      Source {c |}       SS           df       MS      Number of obs   ={res}
  >     40
  {txt}{hline 13}{c +}{hline 34}   F(1, 38)        = {res}     0.46
  {txt}       Model {c |} {res} 31.0571696         1  31.0571696   {txt}Prob > F
  > ={res}    0.5039
  {txt}    Residual {c |} {res} 2591.55271        38  68.1987555   {txt}R-squared
  > ={res}    0.0118
  {txt}{hline 13}{c +}{hline 34}   Adj R-squared   ={res}   -0.0142
  {txt}       Total {c |} {res} 2622.60988        39  67.2464072   {txt}Root MSE
  > =   {res} 8.2583
```

```
{txt}{hline 13}{c TT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{col 1}environmen~l{col 14}{c |} Coefficient{col 26}  Std. err.{col 38}      t{col 46}
>    P>|t|{col 54}     [95% con{col 67}f. interval]
{hline 13}{c +}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{space 4}economic {c |}{col 14}{res}{space 2} .1314763{col 26}{space 2} .1948295{col 3
> 7}{space 1}    0.67{col 46}{space 3}0.504{col 54}{space 4}-.2629355{col 67}{space 3}
>  .5258881
{txt}{space 7}_cons {c |}{col 14}{res}{space 2} 29.26388{col 26}{space 2} 11.06328{col
>  37}{space 1}    2.65{col 46}{space 3}0.012{col 54}{space 4} 6.867447{col 67}{space
> 3} 51.66031
{txt}{hline 13}{c BT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{res}{txt}
{com}. regress environmental economic if gdpquartile == 3

{txt}      Source {c |}       SS           df       MS      Number of obs   ={res}
>     42
{txt}{hline 13}{c +}{hline 34}   F(1, 40)        = {res}     8.16
{txt}       Model {c |} {res} 388.165967         1  388.165967   {txt}Prob > F
> ={res}    0.0068
{txt}    Residual {c |} {res} 1902.01693        40  47.5504231   {txt}R-squared
> ={res}    0.1695
{txt}{hline 13}{c +}{hline 34}   Adj R-squared   ={res}    0.1487
{txt}       Total {c |} {res} 2290.18289        41  55.8581193   {txt}Root MSE
> =   {res} 6.8957

{txt}{hline 13}{c TT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{col 1}environmen~l{col 14}{c |} Coefficient{col 26}  Std. err.{col 38}      t{col 46}
>    P>|t|{col 54}     [95% con{col 67}f. interval]
{hline 13}{c +}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{space 4}economic {c |}{col 14}{res}{space 2} .4713122{col 26}{space 2} .1649594{col 3
> 7}{space 1}    2.86{col 46}{space 3}0.007{col 54}{space 4} .1379167{col 67}{space 3}
>  .8047076
{txt}{space 7}_cons {c |}{col 14}{res}{space 2} 16.44176{col 26}{space 2} 10.07176{col
>  37}{space 1}    1.63{col 46}{space 3}0.110{col 54}{space 4}-3.914015{col 67}{space
> 3} 36.79754
{txt}{hline 13}{c BT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{res}{txt}
{com}. regress environmental economic if gdpquartile == 4

{txt}      Source {c |}       SS           df       MS      Number of obs   ={res}
>     44
{txt}{hline 13}{c +}{hline 34}   F(1, 42)        = {res}    11.26
{txt}       Model {c |} {res} 1161.38659         1  1161.38659   {txt}Prob > F
> ={res}    0.0017
{txt}    Residual {c |} {res} 4332.37483        42  103.151782   {txt}R-squared
> ={res}    0.2114
{txt}{hline 13}{c +}{hline 34}   Adj R-squared   ={res}    0.1926
{txt}       Total {c |} {res} 5493.76142        43  127.761893   {txt}Root MSE
> =   {res} 10.156

{txt}{hline 13}{c TT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{col 1}environmen~l{col 14}{c |} Coefficient{col 26}  Std. err.{col 38}      t{col 46}
>    P>|t|{col 54}     [95% con{col 67}f. interval]
{hline 13}{c +}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{space 4}economic {c |}{col 14}{res}{space 2} .7639695{col 26}{space 2} .2276806{col 3
> 7}{space 1}    3.36{col 46}{space 3}0.002{col 54}{space 4} .3044915{col 67}{space 3}
>  1.223448
{txt}{space 7}_cons {c |}{col 14}{res}{space 2} 2.912793{col 26}{space 2} 16.18101{col
>  37}{space 1}    0.18{col 46}{space 3}0.858{col 54}{space 4} -29.7418{col 67}{space
> 3} 35.56738
{txt}{hline 13}{c BT}{hline 11}{hline 11}{hline 9}{hline 8}{hline 13}{hline 12}
{res}{txt}
{com}.
```

```
17. translate EconomicEnvironmental.do EconomicEnvironmentalGDPdo.pdf, translator(txt2pd
  > f) replace
  {txt}{p 0 4 2}
  file {bf}
  EconomicEnvironmentalGDPdo.pdf{rm}
  saved as
  PDF
  format
  {p_end}
```