

```

{smcl}
{com}{sf}{ul off}{txt}{.-}
      name: {res}<unnamed>
      {txt}log: {res}C:\Users\Gtjohnso\Documents\pset 5.smcl
      {txt}log type: {res}smcl
      {txt}opened on: {res} 9 Mar 2024, 22:54:28
{txt}
{com}.
. *sort data set by hrs
. sort hours
{txt}
{com}. *list country with lowest avrg
. list country hours in 1
{txt}
      {c TLC}{hline 9}{c -}{hline 8}{c TRC}
      {c |} {res}country      hours {txt}{c |}
      {c LT}{hline 9}{c -}{hline 8}{c RT}
1. {c |} {res}Germany      1204.6 {txt}{c |}
      {c BLC}{hline 9}{c -}{hline 8}{c BRC}

{com}.
. *highest avrg
. count
      {res}18
{txt}
{com}. list country hours in 18
{txt}
      {c TLC}{hline 13}{c -}{hline 8}{c TRC}
      {c |} {res}      country      hours {txt}{c |}
      {c LT}{hline 13}{c -}{hline 8}{c RT}
18. {c |} {res}Switzerland      1736.8 {txt}{c |}
      {c BLC}{hline 13}{c -}{hline 8}{c BRC}

{com}.
. *make scater plot
. scatter hours taxrate if male == 1
{res}{txt}
{com}.
. *model a
. reg hours taxrate if male == 1

{txt}      Source {c |}      SS      df      MS      Number of obs
={res}      18
{txt}{hline 13}{c +}{hline 34}      F(1, 16)      = {res}      9.24
{txt}      Model {c |} {res} 128089.602      1 128089.602
{txt}Prob > F      = {res}      0.0078
{txt}      Residual {c |} {res} 221786.331      16 13861.6457 {txt}R-
squared      = {res}      0.3661
{txt}{hline 13}{c +}{hline 34}      Adj R-squared      = {res}      0.3265
{txt}      Total {c |} {res} 349875.932      17 20580.9372
{txt}Root MSE      = {res} 117.74

{txt}{hline 13}{c TT}{hline 11}{hline 11}{hline 9}{hline 8}{hline
13}{hline 12}

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{col 1}          hours{col 14}{c |}          Coef.{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 5}taxrate {c |}{col 14}{res}{space 2}-11.22422{col 26}{space 2}
3.692383{col 37}{space 1}    -3.04{col 46}{space 3}0.008{col 54}{space 4}-
19.05172{col 67}{space 3}-3.396721
{txt}{space 7}_cons {c |}{col 14}{res}{space 2} 1748.481{col 26}{space 2}
111.6892{col 37}{space 1}    15.65{col 46}{space 3}0.000{col 54}{space 4}
1511.71{col 67}{space 3} 1985.251
{txt}{hline 13}{c BT}{hline 11}{hline 11}{hline 9}{hline 8}{hline
13}{hline 12}
{res}{txt}
{com}.
. *model c
. reg hours divorcerate if male == 1

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{txt}          Source {c |}          SS          df          MS          Number of obs
={res}          18
{txt}{hline 13}{c +}{hline 34}    F(1, 16)          = {res}          0.01
{txt}          Model {c |} {res} 235.912641          1 235.912641
{txt}Prob > F          = {res}          0.9185
{txt}    Residual {c |} {res} 349640.019          16 21852.5012 {txt}R-
squared          = {res}          0.0007
{txt}{hline 13}{c +}{hline 34}    Adj R-squared    = {res}          -0.0618
{txt}          Total {c |} {res} 349875.932          17 20580.9372
{txt}Root MSE          = {res} 147.83

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{txt}{hline 13}{c TT}{hline 11}{hline 11}{hline 9}{hline 8}{hline
13}{hline 12}
{col 1}          hours{col 14}{c |}          Coef.{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 1}divorcerate {c |}{col 14}{res}{space 2} 1.797757{col 26}{space
2} 17.30238{col 37}{space 1}    0.10{col 46}{space 3}0.919{col 54}{space
4}-34.88165{col 67}{space 3} 38.47717
{txt}{space 7}_cons {c |}{col 14}{res}{space 2} 1410.642{col 26}{space 2}
93.08658{col 37}{space 1}    15.15{col 46}{space 3}0.000{col 54}{space 4}
1213.308{col 67}{space 3} 1607.977
{txt}{hline 13}{c BT}{hline 11}{hline 11}{hline 9}{hline 8}{hline
13}{hline 12}
{res}{txt}
{com}.
. *import women data
. import delimited C:\Users\Gtjohnso\Documents\tax_rate_hours_women.csv,
clear
{res}{text}(6 vars, 18 obs)

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{com}. *model b
. reg hours taxrate if male == 0

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• {txt}          Source {c |}          SS          df          MS          4.obs
  = {res}          18
{txt}{hline 13}{c +}{hline 34}    F(1, 16)          = {res}          0.01

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{txt}      Model {c |} {res} 290.576447      1  290.576447
{txt}Prob > F      ={res}    0.9166
{txt}      Residual {c |} {res} 410632.632      16  25664.5395  {txt}R-
squared      ={res}    0.0007
{txt}{hline 13}{c +}{hline 34}      Adj R-squared      ={res}    -0.0617
{txt}      Total {c |} {res} 410923.208      17  24171.9534
{txt}Root MSE      =      {res} 160.2

{txt}{hline 13}{c TT}{hline 11}{hline 11}{hline 9}{hline 8}{hline
13}{hline 12}
{col 1}      hours{col 14}{c |}      Coef.{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 5}taxrate {c |}{col 14}{res}{space 2} .5346007{col 26}{space 2}
5.02419{col 37}{space 1}      0.11{col 46}{space 3}0.917{col 54}{space 4}-
10.11621{col 67}{space 3} 11.18541
{txt}{space 7}_cons {c |}{col 14}{res}{space 2} 827.0473{col 26}{space 2}
151.9744{col 37}{space 1}      5.44{col 46}{space 3}0.000{col 54}{space 4}
504.8759{col 67}{space 3} 1149.219
{txt}{hline 13}{c BT}{hline 11}{hline 11}{hline 9}{hline 8}{hline
13}{hline 12}
{res}{txt}
{com}.
. *model d
. reg hours divorcerate if male == 0

{txt}      Source {c |}      SS      df      MS      Number of obs
={res}      18
{txt}{hline 13}{c +}{hline 34}      F(1, 16)      = {res}      11.30
{txt}      Model {c |} {res} 170123.953      1  170123.953
{txt}Prob > F      ={res}    0.0040
{txt}      Residual {c |} {res} 240799.255      16  15049.9535  {txt}R-
squared      ={res}    0.4140
{txt}{hline 13}{c +}{hline 34}      Adj R-squared      ={res}    0.3774
{txt}      Total {c |} {res} 410923.208      17  24171.9534
{txt}Root MSE      =      {res} 122.68

{txt}{hline 13}{c TT}{hline 11}{hline 11}{hline 9}{hline 8}{hline
13}{hline 12}
{col 1}      hours{col 14}{c |}      Coef.{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 1}divorcerate {c |}{col 14}{res}{space 2} 48.27675{col 26}{space
2} 14.35896{col 37}{space 1}      3.36{col 46}{space 3}0.004{col 54}{space
4} 17.83712{col 67}{space 3} 78.71638
{txt}{space 7}_cons {c |}{col 14}{res}{space 2} 601.8638{col 26}{space 2}
77.25099{col 37}{space 1}      7.79{col 46}{space 3}0.000{col 54}{space 4}
438.099{col 67}{space 3} 765.6286
{txt}{hline 13}{c BT}{hline 11}{hline 11}{hline 9}{hline 8}{hline
13}{hline 12}
{res}{txt}
{com}.
. *model e
. reg hours divorcerate taxrate if male == 0

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{txt}      Source {c |}      SS      df      MS      Number of obs
={res}      18
{txt}{hline 13}{c +}{hline 34}      F(2, 15)      = {res}      8.46
{txt}      Model {c |} {res} 217826.843      2 108913.422
{txt}Prob > F      = {res}      0.0035
{txt}      Residual {c |} {res} 193096.365      15 12873.091 {txt}R-
squared      = {res}      0.5301
{txt}{hline 13}{c +}{hline 34}      Adj R-squared      = {res}      0.4674
{txt}      Total {c |} {res} 410923.208      17 24171.9534
{txt}Root MSE      = {res} 113.46

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{txt}{hline 13}{c TT}{hline 11}{hline 11}{hline 9}{hline 8}{hline
13}{hline 12}
{col 1}      hours{col 14}{c |}      Coef.{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 1}divorcerate {c |}{col 14}{res}{space 2} 63.03349{col 26}{space
2} 15.3337{col 37}{space 1} 4.11{col 46}{space 3}0.001{col 54}{space
4} 30.35048{col 67}{space 3} 95.7165
{txt}{space 5}taxrate {c |}{col 14}{res}{space 2}-7.909006{col 26}{space
2} 4.108573{col 37}{space 1} -1.93{col 46}{space 3}0.073{col 54}{space
4}-16.66622{col 67}{space 3} .8482095
{txt}{space 7}_cons {c |}{col 14}{res}{space 2} 759.9779{col 26}{space 2}
108.8625{col 37}{space 1} 6.98{col 46}{space 3}0.000{col 54}{space 4}
527.943{col 67}{space 3} 992.0129
{txt}{hline 13}{c BT}{hline 11}{hline 11}{hline 9}{hline 8}{hline
13}{hline 12}
{res}{txt}
{com}.
. *close log
. log close
      {txt}name: {res}<unnamed>
      {txt}log: {res}C:\Users\Gtjohnso\Documents\pset 5.smcl
      {txt}log type: {res}smcl
      {txt}closed on: {res} 9 Mar 2024, 22:54:29
{txt}{.-}
{smcl}
{txt}{sf}{ul off}

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