```
 1 . do "/var/folders/6_/w9g0lyhn5632jr666js3y_lw0000gn/T//SD77589.000000"

 2 . clear

 3 . cd "/Users/haivanle/Documents/Kellogg23"
   /Users/haivanle/Documents/Kellogg23

 4 . use "cps_wages_LFP_10pct.dta"

 5 . summarize wage

    Variable |        Obs        Mean    Std. dev.       Min        Max
-------------+---------------------------------------------------------
        wage |    259,994    14.85763     20.6808          0   3525.638

 6 . gen logwage = log(wage)
   (445,362 missing values generated)

 7 .
 8 . sort sex

 9 . by sex: sum logwage

------------------------------------------------------------------------------------------------------------------------
-> sex = male

    Variable |        Obs        Mean    Std. dev.       Min        Max
-------------+---------------------------------------------------------
     logwage |    132,708    2.549232    .8529921   -8.33327   8.167817

------------------------------------------------------------------------------------------------------------------------
-> sex = female

    Variable |        Obs        Mean    Std. dev.       Min        Max
-------------+---------------------------------------------------------
     logwage |    109,249    2.286547     .835998  -8.546364   6.999563


10 . sort sex educ

11 . by sex: sum logwage

------------------------------------------------------------------------------------------------------------------------
-> sex = male

    Variable |        Obs        Mean    Std. dev.       Min        Max
-------------+---------------------------------------------------------
     logwage |    132,708    2.549232    .8529921   -8.33327   8.167817

------------------------------------------------------------------------------------------------------------------------
-> sex = female

    Variable |        Obs        Mean    Std. dev.       Min        Max
-------------+---------------------------------------------------------
     logwage |    109,249    2.286547     .835998  -8.546364   6.999563


12 .
13 . bysort year: egen meanwage = mean(wage)
```

```
14 . bysort year: egen meanlogwage = mean(logwage)

15 . twoway line meanwage year

16 . twoway line meanlogwage year

17 .
18 . egen meanlogwage2 = mean(logwage), by(sex year)

19 .
20 . twoway (line meanlogwage2 year if sex == 1, sort lcolor(blue) lwidth(medium) lpattern(solid)) ///
   >        (line meanlogwage2 year if sex == 2, sort lcolor(red) lwidth(medium) lpattern(dash)), ///
   >        legend(order(1 "Men" 2 "Women") ring(0) pos(10)) ///
   >        title("Changes in Mean Log Wage Over Time by Sex") ///
   >        xlabel(, format(%ty)) ///
   >        ylabel(, format(%9.2f)) ///
   >        xtitle("Year") ///
   >        ytitle("Mean Log Wage")

21 .
22 .
23 . * Calculate the mean labor force participation rate for each year
24 . collapse (mean) participation_rate=lfp, by(year)

25 .
26 . * Create a line chart for labor force participation rates over the years
27 . twoway (line participation_rate year, lcolor(blue) lwidth(medium) lpattern(solid)), ///
   >        title("Labor Force Participation Rates Over Time") ///
   >        xlabel(, format(%ty)) ///
   >        ylabel(, format(%9.2f)) ///
   >        xtitle("Year") ///
   >        ytitle("Participation Rate")

28 .
29 .
30 . clear

31 . cd "/Users/haivanle/Documents/Kellogg23"
   /Users/haivanle/Documents/Kellogg23

32 . use "cps_wages_LFP_10pct.dta"

33 .
34 .
35 . * Calculate the mean labor force participation rate for each year
36 . collapse (mean) participation_rate=lfp, by(year sex)

37 .
38 . twoway (line participation_rate year if sex == 1, sort lcolor(blue) lwidth(medium) lpattern(solid)) ///
   >        (line participation_rate year if sex == 2, sort lcolor(red) lwidth(medium) lpattern(dash)), ///
   >        legend(order(1 "Men" 2 "Women") ring(0) pos(10)) ///
   >        title("Changes in Labor Force Participation Rates Over Time by Sex") ///
   >        xlabel(, format(%ty)) ///
   >        ylabel(, format(%9.2f)) ///
   >        xtitle("Year") ///
   >        ytitle("Participation Rates")

39 .
40 . clear

41 . cd "/Users/haivanle/Documents/Kellogg23"
```

```
. cd "/Users/haivanle/Documents/Kellogg23"
/Users/haivanle/Documents/Kellogg23

. use "cps_wages_LFP_10pct.dta"

. 
. collapse (mean) participation_rate=lfp if sex == 1 & age > 25, by(year age_group)

. 
. twoway (line participation_rate year if age_group == 1, sort lcolor(blue) lwidth(medium) lpattern(solid)) ///
>        (line participation_rate year if age_group == 2, sort lcolor(red) lwidth(medium) lpattern(dash)) ///
>            (line participation_rate year if age_group == 3, sort lcolor(green) lwidth(medium) lpattern(dot)),
>  ///
>        legend(order(1 "Age 25-45" 2 "Age 45-65" 3 "Age 65+") ring(0) pos(10)) ///
>        title("Labor Force Participation Rates by Age Group for Males 25+") ///
>        xlabel(, format(%ty)) ///
>        ylabel(, format(%9.2f)) ///
>        xtitle("Year") ///
>        ytitle("Participation Rates")

. 
. clear

. cd "/Users/haivanle/Documents/Kellogg23"
/Users/haivanle/Documents/Kellogg23

. use "cps_wages_LFP_10pct.dta"

. 
. reg lfp educ skilled age white if sex == 1 & age > 25

      Source |       SS           df       MS      Number of obs   =   190,936
-------------+----------------------------------   F(4, 190931)    = 25250.89
       Model |  11858.8869         4  2964.72173   Prob > F        =    0.0000
    Residual |  22417.3184   190,931  .117410575   R-squared       =    0.3460
-------------+----------------------------------   Adj R-squared   =    0.3460
       Total |  34276.2053   190,935  .179517665   Root MSE        =    .34265

------------------------------------------------------------------------------
         lfp | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
        educ |   .0020952   .0000434    48.33   0.000     .0020102    .0021802
     skilled |  -.0034821    .002415    -1.44   0.149    -.0082154    .0012511
         age |  -.0153104   .0000527  -290.27   0.000    -.0154137    -.015207
       white |   .0585937   .0022229    26.36   0.000      .054237    .0629505
       _cons |   1.287092   .0044288   290.62   0.000     1.278412    1.295773
------------------------------------------------------------------------------

. reg lfp sex educ skilled age white

      Source |       SS           df       MS      Number of obs   =   520,847
-------------+----------------------------------   F(5, 520841)    = 22376.98
       Model |  21160.9038         5  4232.18076   Prob > F        =    0.0000
    Residual |  98507.2026   520,841  .189131045   R-squared       =    0.1768
-------------+----------------------------------   Adj R-squared   =    0.1768
       Total |  119668.106   520,846  .229757177   Root MSE        =    .43489

------------------------------------------------------------------------------
         lfp | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         sex |  -.1488784   .0012086  -123.19   0.000    -.1512472   -.1465097
        educ |   .0054337    .000034   159.83   0.000     .0053671    .0055003
```

skilled	**-.0178203**	**.0018468**	**-9.65**	**0.000**	**-.0214399**	**-.0142007**
age	**-.0065785**	**.0000329**	**-199.66**	**0.000**	**-.0066431**	**-.0065139**
white	**.0348037**	**.0016349**	**21.29**	**0.000**	**.0315994**	**.038008**
_cons	**.7153108**	**.0033888**	**211.08**	**0.000**	**.7086688**	**.7219528**

```
54 .
   end of do-file

55 .
```