STaTa
Statistics/Data Analysis

```
1 . clear

2 .
3 . /*
  >    Back to Fan's Stata4Econ or other repositories:
  >    - http://fanwangecon.github.io
  >    - http://fanwangecon.github.io/Stata4Econ
  >    - http://fanwangecon.github.io/R4Econ
  >    - http://fanwangecon.github.io/M4Econ
  >    - http://fanwangecon.github.io/CodeDynaAsset/
  >    - http://fanwangecon.github.io/Math4Econ/
  >    - http://fanwangecon.github.io/Stat4Econ/
  >    - http://fanwangecon.github.io/Tex4Econ
  >
  >    1. Same regression for two Subgroups
  >    2. Show alll subgroup coefficients in one regression
  > */
4 .
5 . ///--- Start log
  > set more off

6 . capture log close

7 . cd "${root_log}"
  C:\Users\fan\Documents\Dropbox (UH-ECON)\Project Emily Minority Survey\Code

8 . global curlogfile "~\Stata4Econ\reglin\discrete\fs_reg_d_interact"

9 . log using "${curlogfile}" , replace
  (note: file C:\Users\fan\Stata4Econ\reglin\discrete\fs_reg_d_interact.smcl not found)
```

```
        name:  <unnamed>
         log:  C:\Users\fan\Stata4Econ\reglin\discrete\fs_reg_d_interact.smcl
    log type:  smcl
   opened on:  1 Aug 2019, 21:24:50

10. log on
  (log already on)

11.
12. ///--- Load Data
  > set more off

13. sysuse auto, clear
  (1978 Automobile Data)

14.
15. tab rep78
```

```
     Repair |
 Record 1978 |      Freq.      Percent        Cum.
-------------+-----------------------------------
           1 |          2         2.90        2.90
           2 |          8        11.59       14.49
           3 |         30        43.48       57.97
           4 |         18        26.09       84.06
           5 |         11        15.94       100.00
-------------+-----------------------------------
       Total |         69       100.00
```

16. tab foreign

Car type	Freq.	Percent	Cum.
Domestic	52	70.27	70.27
Foreign	22	29.73	100.00
Total	74	100.00	

17.
18. * 1. Same regression for two Subgroups
19. eststo clear

20. eststo, title(dom): regress weight ib3.rep78 if foreign == 0

Source	SS	df	MS		
Model	4501656.94	4	1125414.24	Number of obs =	48
Residual	17746209.7	43	412702.552	F(4, 43) =	2.73
				Prob > F =	0.0414
				R-squared =	0.2023
				Adj R-squared =	0.1281
Total	22247866.7	47	473358.865	Root MSE =	642.42

weight	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
rep78						
1	-342.2222	470.7829	-0.73	0.471	-1291.646	607.202
2	-88.47222	258.5983	-0.34	0.734	-609.9855	433.041
4	90	247.2673	0.36	0.718	-408.662	588.662
5	-1482.222	470.7829	-3.15	0.003	-2431.646	-532.798
_cons	3442.222	123.6337	27.84	0.000	3192.891	3691.553

  (est1 stored)

21. eststo, title(foreign): regress weight ib3.rep78 if foreign == 1

Source	SS	df	MS		
Model	396711.111	2	198355.556	Number of obs =	21
Residual	2263555.56	18	125753.086	F(2, 18) =	1.58
				Prob > F =	0.2338
				R-squared =	0.1491
				Adj R-squared =	0.0546
Total	2660266.67	20	133013.333	Root MSE =	354.62

weight	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
rep78						
4	197.7778	236.4112	0.84	0.414	-298.9037	694.4593
5	393.3333	236.4112	1.66	0.113	-103.3482	890.0149
_cons	2010	204.7381	9.82	0.000	1579.861	2440.139

  (est2 stored)

22. esttab, mtitle title("Foreign or Domestic")

Foreign or Domestic

	(1)	(2)
	dom	foreign
1.rep78	-342.2	
	(-0.73)	
2.rep78	-88.47	
	(-0.34)	
3.rep78	0	0
	(.)	(.)

4.rep78	90.00	197.8
	(0.36)	(0.84)
5.rep78	-1482.2**	393.3
	(-3.15)	(1.66)
_cons	3442.2***	2010.0***
	(27.84)	(9.82)
N	48	21

t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001

```
23.
24. * 2. Show alll subgroup coefficients in one regression
25. capture drop domestic

26. recode foreign ///
>     (0 = 1 "domestic") ///1
>     (1 = 0 "foreign") ///
>     (else = .) ///
>     , ///
>     gen(domestic)
(74 differences between foreign and domestic)

27. tab domestic foreign
```

RECODE of foreign (Car type)	Car type Domestic	Foreign	Total
foreign	0	22	22
domestic	52	0	52
Total	52	22	74

```
28.
29. * using factor for binary
30. eststo clear

31. eststo, title(both): quietly regress ///
>     weight ///
>     ib0.foreign ib0.domestic ///
>     ib3.rep78#ib0.foreign ///
>     ib3.rep78#ib0.domestic ///
>     , noc
(est1 stored)

32. esttab, mtitle title("Foreign or Domestic")
```

Foreign or Domestic

| | (1) |
	both
0.foreign	0
	(.)
1.foreign	2010.0***
	(6.08)
0.domestic	0
	(.)
1.domestic	3442.2***
	(31.23)
1.rep78#0.~n	-342.2
	(-0.82)

1.rep78#1.~n	0 (.)
2.rep78#0.~n	-88.47 (-0.38)
2.rep78#1.~n	0 (.)
3.rep78#0.~n	0 (.)
3.rep78#1.~n	0 (.)
4.rep78#0.~n	90.00 (0.41)
4.rep78#1.~n	197.8 (0.52)
5.rep78#0.~n	-1482.2*** (-3.53)
5.rep78#1.~n	393.3 (1.03)
1.rep78#0.~c	0 (.)
1.rep78#1.~c	0 (.)
2.rep78#0.~c	0 (.)
2.rep78#1.~c	0 (.)
3.rep78#0.~c	0 (.)
3.rep78#1.~c	0 (.)
4.rep78#0.~c	0 (.)
4.rep78#1.~c	0 (.)
5.rep78#0.~c	0 (.)
5.rep78#1.~c	0 (.)
N	69

t statistics in parentheses
* $p<0.05$, ** $p<0.01$, *** $p<0.001$

```
33.
34. * using cts for binary
35. eststo clear

36. eststo, title(both): quietly regress ///
  >     weight ///
  >     c.foreign c.domestic ///
  >     ib3.rep78#c.foreign ///
  >     ib3.rep78#c.domestic ///
  >     , noc
  (est1 stored)

37. esttab, mtitle title("Foreign or Domestic")
```

Foreign or Domestic

| | (1) |
	both
foreign	2010.0***
	(6.08)
domestic	3442.2***
	(31.23)
1.rep78#c.~n	0
	(.)
2.rep78#c.~n	0
	(.)
3.rep78#c.~n	0
	(.)
4.rep78#c.~n	197.8
	(0.52)
5.rep78#c.~n	393.3
	(1.03)
1.rep78#c.~c	-342.2
	(-0.82)
2.rep78#c.~c	-88.47
	(-0.38)
3.rep78#c.~c	0
	(.)
4.rep78#c.~c	90.00
	(0.41)
5.rep78#c.~c	-1482.2***
	(-3.53)
N	69

t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001

```
38.
39.
40. ///--- End Log and to HTML
  > log close
         name:  <unnamed>
          log:  C:\Users\fan\Stata4Econ\reglin\discrete\fs_reg_d_interact.smcl
     log type:  smcl
    closed on:   1 Aug 2019, 21:24:51
  ─────────────────────────────────────────────────────────────────────────────

41. capture noisily {
42.    log2html "${curlogfile}", replace
  (note: file C:\Users\fan\Stata4Econ\reglin\discrete\fs_reg_d_interact.html not found)

  HTML log file ~\Stata4Econ\reglin\discrete\fs_reg_d_interact.html created
43. }

44. capture noisily {
45.    erase "${curlogfile}.smcl"
46. }

47. ///--- to PDF
  > capture noisily {
48.            translate @Results "${curlogfile}.pdf", replace translator(Results2pdf)
```