```
. clear

.
. /*
>    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
> */
.
. ///--- Start log
> set more off

. capture log close

. cd "${root_log}"
C:\Users\fan\Documents\Dropbox (UH-ECON)\Project Emily Minority Survey\CodeEdccRR\Board\tab45

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

. 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:  16 Aug 2019, 19:02:11

. log on
(log already on)

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

. sysuse auto, clear
(1978 Automobile Data)

.
. 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	

```
. tab foreign
```

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

```
.
. * 1. Same regression for two Subgroups
. eststo clear

. 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)

. 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)

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

Foreign or Domestic
```

	(1) dom	(2) foreign
1.rep78	-342.2 (-0.73)	
2.rep78	-88.47 (-0.34)	
3.rep78	0 (.)	0 (.)
4.rep78	90.00 (0.36)	197.8 (0.84)
5.rep78	-1482.2** (-3.15)	393.3 (1.66)
_cons	3442.2*** (27.84)	2010.0*** (9.82)
N	48	21

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

.
. * 2. Show alll subgroup coefficients in one regression
. capture drop domestic

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

. 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

```
.
. * using factor for binary
. eststo clear

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

. 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

```
.
. * Streamlined
. eststo clear

. regress ///
>      weight ///
>      ib0.foreign ib0.domestic ///
>      ib3.rep78#ib0.foreign ///
>      , noc
note: 1.rep78#1.foreign identifies no observations in the sample
note: 2.rep78#1.foreign identifies no observations in the sample
```

Source	SS	df	MS	Number of obs	=	69
				F(8, 61)	=	250.38
Model	657066735	8	82133341.8	Prob > F	=	0.0000
Residual	20009765.3	61	328028.939	R-squared	=	0.9704
				Adj R-squared	=	0.9666
Total	677076500	69	9812702.9	Root MSE	=	572.74

weight	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
foreign						
Foreign	2010	330.6705	6.08	0.000	1348.783	2671.217
domestic						
domestic	3442.222	110.2235	31.23	0.000	3221.817	3662.628
rep78#foreign						
1#Domestic	-342.2222	419.7186	-0.82	0.418	-1181.501	497.057
1#Foreign	0	(empty)				
2#Domestic	-88.47222	230.549	-0.38	0.703	-549.4834	372.539
2#Foreign	0	(empty)				
4#Domestic	90	220.447	0.41	0.685	-350.811	530.811
4#Foreign	197.7778	381.8254	0.52	0.606	-565.7293	961.2849
5#Domestic	-1482.222	419.7186	-3.53	0.001	-2321.501	-642.943
5#Foreign	393.3333	381.8254	1.03	0.307	-370.1738	1156.84

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

Foreign or Domestic

	(1) .
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)
```

N	69

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


.
. * Streamlined 2
. eststo clear

. regress ///
>     weight ///
>     ib0.foreign ///
>     ib3.rep78#ib0.foreign
note: 1.rep78#1.foreign identifies no observations in the sample
note: 2.rep78#1.foreign identifies no observations in the sample
```

Source	SS	df	MS		Number of obs	=	69
					F(7, 61)	=	9.90
Model	22735950.7	7	3247992.95		Prob > F	=	0.0000
Residual	20009765.3	61	328028.939		R-squared	=	0.5319
					Adj R-squared	=	0.4782
Total	42745715.9	68	628613.47		Root MSE	=	572.74

weight	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
foreign						
Foreign	-1432.222	348.5573	-4.11	0.000	-2129.206	-735.2388
rep78#foreign						
1#Domestic	-342.2222	419.7186	-0.82	0.418	-1181.501	497.057
1#Foreign	0	(empty)				
2#Domestic	-88.47222	230.549	-0.38	0.703	-549.4834	372.539
2#Foreign	0	(empty)				
4#Domestic	90	220.447	0.41	0.685	-350.811	530.811
4#Foreign	197.7778	381.8254	0.52	0.606	-565.7293	961.2849
5#Domestic	-1482.222	419.7186	-3.53	0.001	-2321.501	-642.943
5#Foreign	393.3333	381.8254	1.03	0.307	-370.1738	1156.84
_cons	3442.222	110.2235	31.23	0.000	3221.817	3662.628

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

Foreign or Domestic
```

	(1)
	.
0.foreign	0
	(.)
1.foreign	-1432.2***
	(-4.11)
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)
_cons	3442.2***
	(31.23)
N	69

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


.
. * using cts for binary
. eststo clear

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

. 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


.
. ///--- 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:  16 Aug 2019, 19:02:11
```

```
. capture noisily {
.    log2html "${curlogfile}", replace

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

. ///--- to PDF
> capture noisily {
.          translator set Results2pdf logo off
.          translator set Results2pdf fontsize 8
.          translator set Results2pdf pagesize custom
.          translator set Results2pdf pagewidth 9
.          translator set Results2pdf pageheight 20
.          translator set Results2pdf lmargin 0.2
.          translator set Results2pdf rmargin 0.2
.          translator set Results2pdf tmargin 0.2
.          translator set Results2pdf bmargin 0.2
.          translate @Results "${curlogfile}.pdf", replace translator(Results2pdf)
```