```
STata
Statistics/Data Analysis
```

```
1 . clear

2 .
3 . /*
  >    Back to Fan's Stata4Econ:
  >    - http://fanwangecon.github.io
  >    - http://fanwangecon.github.io/Stata4Econ
  >
  >    1. Same regression for two Subgroups
  >    2. Show alll subgroup coefficients in one regression
  > */
4 .
5 . set more off

6 . sysuse auto, clear
  (1978 Automobile Data)

7 .
8 . 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	

```
9 . tab foreign
```

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

```
10.
11. * 1. Same regression for two Subgroups
12. eststo clear

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

Source	SS	df	MS		
Model	4501656.94	4	1125414.24		
Residual	17746209.7	43	412702.552		
Total	22247866.7	47	473358.865		

Number of obs = 48
$F(4, 43)$ = 2.73
Prob > F = 0.0414
R-squared = 0.2023
Adj R-squared = 0.1281
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)
```

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

Source	SS	df	MS			
Model	396711.111	2	198355.556			
Residual	2263555.56	18	125753.086			
Total	2660266.67	20	133013.333			

Number of obs = 21
F(2, 18) = 1.58
Prob > F = 0.2338
R-squared = 0.1491
Adj R-squared = 0.0546
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)

15. 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

16.
17. * 2. Show alll subgroup coefficients in one regression
18. capture drop domestic

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

```
20. 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

```
21.
22. * using factor for binary
23. eststo clear

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

25. 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

26.
27. * using cts for binary
28. eststo clear

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

30. 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

31.
32.
33. translate @Results "~\Stata4Econ\reglin\discrete\reg_d_interact.pdf", replace translator(Results2p