

```
name: <unnamed>
log: C:\Users\fan\Stata4Econ\reglin\multipanel\allpurpose\allpurpose.smcl
log type: smcl
opened on: 1 Sep 2019, 16:17:23
```

```
1 . log on
   (log already on)

2 .
3 . set trace off

4 . set tracedepth 1

5 .
6 . //////////////////////////////////////////
   > ///--- A0. Load Data
   > //////////////////////////////////////////
   >

7 . set more off

8 . set trace off

9 .
10. sysuse auto, clear
   (1978 Automobile Data)

11.
12. ///--- Controls
   > global quiornot "qui"

13. * global quiornot "noi"
14.
15. //////////////////////////////////////////
   > ///--- A1. Core String Initiation
   > //////////////////////////////////////////
   > /*
   > A regression has:
   > 1. reg method
   > 2. LHS
   > 3. RHS (to keep)
   > 4. RHS (controls not to show in table)
   > 5. Conditions
   > 6. reg options
   > */

16.
17. * rgc = regression, opt = option
18. global stc_rgc "reg"

19. global stc_opt ", robust"

20.
21. * sca = what scalar statistics to obtain from reg
22. global stc_sca "r2 rank"

23.
24. * cdn = conditioning
25. global sif_cdn "if price !=. & foreign !=."

26.
27. * variable names lists
28. global svr_lhs "price"

29. global svr_rhs "rep78"

30. global svr_cov "gear_ratio"

31. global svr_kep "${svr_rhs}"

32.
33. //////////////////////////////////////////
   > ///--- A2. Set Number of Rows and Columns
   > //////////////////////////////////////////
   >

34. * column count, and panel count
35. global it_col_cnt = 5

36. global it_pan_cnt = 6

37.
38. //////////////////////////////////////////
   > ///--- A3. Labeling
   > //////////////////////////////////////////
   >

39. global slb_col "price"

40. global slb_pan "current panel results"

41.
42. * eso = esttab options
43. global slb_eso "label stats(N ${stc_sca})"

44.
45. //////////////////////////////////////////
   > ///--- B1. Column Specific Strings
   > //////////////////////////////////////////
   >

46. global svr_lhs_col_3 "weight"

47.
48. global sif_cdn_col_5 "& gear_ratio <= 3"

49. global sif_cdn_col_3 "`& trunk != 5 & ~strpos(make, "Ford")"'

50.
51. global svr_rhs_col_4 "weight"

52. global svr_rhs_col_5 "turn"

53.
54. global svr_kep_pan_1 "${svr_rhs_pan_1}"

55. global svr_kep_pan_4 "${svr_rhs_pan_4}"

56.
57. //////////////////////////////////////////
   > ///--- B2. Panel Specific Strings
   > //////////////////////////////////////////
   >

58. global svr_lhs_pan_3 "mpg"

59. global svr_lhs_pan_6 "mpg"

60.
61. global sif_cdn_pan_1 "& foreign == 0"

62. global sif_cdn_pan_2 "& foreign == 1"

63. global sif_cdn_pan_3 "& length >= 190"

64.
65. global svr_rhs_pan_1 "mpg headroom trunk"

66. global svr_rhs_pan_4 "mpg"

67.
68. global svr_kep_pan_1 "${svr_rhs_pan_1} ${svr_rhs_col_1} ${svr_rhs_col_5}"

69. global svr_kep_pan_4 "${svr_rhs_pan_4} ${svr_rhs_col_1} ${svr_rhs_col_5}"

70.
71.
72. //////////////////////////////////////////
   > ///--- C. Define Regression Strings
   > //////////////////////////////////////////
   >

73. foreach it_pan_ctr of numlist 1(1)$it_pan_cnt {
   2.     foreach it_col_ctr of numlist 1(1)$it_col_cnt {
   3.
74.         ///--- Counters
   >         global it_col_ctr "`it_col_ctr'"
   4.         global it_pan_ctr "`it_pan_ctr'"
   5.
75.         ///--- Reset Strings to Default Always, _u = use
   >
76.         * if there are panel or column specific values, replace, eith col or row specific
77.         * generates: stc_rgc_u and stc_opt_u
78.         global stc_rgc_u "${stc_rgc}"
   6.         global stc_opt_u "${stc_opt}"
   7.         global svr_lhs_u "${svr_lhs}"
   8.         global st_ls_rep "stc_rgc stc_opt svr_lhs"
   9.         foreach st_seg in `st_ls_rep' {
  10.             global st_seg "`st_seg'"
  11.
```

```

79.         * di `"$${st_seg}_pan_${it_pan_ctr}: ${${st_seg}_pan_${it_pan_ctr}}"'
80.         * di `"$${st_seg}_col_${it_col_ctr}: ${${st_seg}_col_${it_col_ctr}}"'
81.         * di `"$${st_seg}_pan_${it_pan_ctr}_col_${it_col_ctr}: ${${st_seg}_pan_${it_pan_ctr}_col_${it_col_ctr}}"'
82.
83.         if ("${${st_seg}_pan_${it_pan_ctr}}" != "") {
12.             global ${st_seg}_u `"$${st_seg}_pan_${it_pan_ctr}"'
13.         }
14.         else if ("${${st_seg}_col_${it_col_ctr}}" != "") {
15.             global ${st_seg}_u `"$${st_seg}_col_${it_col_ctr}"'
16.         }
17.         else if ("${${st_seg}_pan_${it_pan_ctr}_col_${it_col_ctr}}" != "") {
18.             global ${st_seg}_u `"$${st_seg}_pan_${it_pan_ctr}_col_${it_col_ctr}"'
19.         }
20.         * di `"$${st_seg}_u: ${${st_seg}_u}"'
84.     }
21.
85.     * if there are panel or column specific values, append
86.     global svr_rhs_u "${svr_rhs} ${svr_rhs_pan_${it_pan_ctr}} ${svr_rhs_col_${it_col_ctr}}"
22.     global svr_cov_u "${svr_cov} ${svr_cov_pan_${it_pan_ctr}} ${svr_cov_col_${it_col_ctr}}"
23.     global sif_cdn_u `"$${sif_cdn} ${sif_cdn_pan_${it_pan_ctr}} ${sif_cdn_col_${it_col_ctr}}"'
24.
87.     ///--- Compose Regression String
>     global srg_pan_${it_pan_ctr}_col_${it_col_ctr} `"$${stc_rgc_u} ${svr_lhs_u} ${svr_rhs_u} ${svr_cov_u} ${sif_cdn_
> u} ${stc_opt_u}"'
25.
88.     ///--- Display Regression String
>     di "PAN=${it_pan_ctr}, COL=${it_col_ctr}"
26.     di `"$${srg_pan_${it_pan_ctr}_col_${it_col_ctr}}"'
27.
89.     }
28. }
PAN={1}, COL={1}
reg price rep78 mpg headroom trunk gear_ratio if price !=. & foreign !=. & foreign == 0 , robust
PAN={1}, COL={2}
reg price rep78 mpg headroom trunk gear_ratio if price !=. & foreign !=. & foreign == 0 , robust
PAN={1}, COL={3}
reg weight rep78 mpg headroom trunk gear_ratio if price !=. & foreign !=. & foreign == 0 & trunk != 5 & ~strpos(make, "F
> ord") , robust
PAN={1}, COL={4}
reg price rep78 mpg headroom trunk weight gear_ratio if price !=. & foreign !=. & foreign == 0 , robust
PAN={1}, COL={5}
reg price rep78 mpg headroom trunk turn gear_ratio if price !=. & foreign !=. & foreign == 0 & gear_ratio <= 3 , robust
PAN={2}, COL={1}
reg price rep78 gear_ratio if price !=. & foreign !=. & foreign == 1 , robust
PAN={2}, COL={2}
reg price rep78 gear_ratio if price !=. & foreign !=. & foreign == 1 , robust
PAN={2}, COL={3}
reg weight rep78 gear_ratio if price !=. & foreign !=. & foreign == 1 & trunk != 5 & ~strpos(make, "Ford") , robust
PAN={2}, COL={4}
reg price rep78 weight gear_ratio if price !=. & foreign !=. & foreign == 1 , robust
PAN={2}, COL={5}
reg price rep78 turn gear_ratio if price !=. & foreign !=. & foreign == 1 & gear_ratio <= 3 , robust
PAN={3}, COL={1}
reg mpg rep78 gear_ratio if price !=. & foreign !=. & length >= 190 , robust
PAN={3}, COL={2}
reg mpg rep78 gear_ratio if price !=. & foreign !=. & length >= 190 , robust
PAN={3}, COL={3}
reg mpg rep78 gear_ratio if price !=. & foreign !=. & length >= 190 & trunk != 5 & ~strpos(make, "Ford") , robust
PAN={3}, COL={4}
reg mpg rep78 weight gear_ratio if price !=. & foreign !=. & length >= 190 , robust
PAN={3}, COL={5}
reg mpg rep78 turn gear_ratio if price !=. & foreign !=. & length >= 190 & gear_ratio <= 3 , robust
PAN={4}, COL={1}
reg price rep78 mpg gear_ratio if price !=. & foreign !=. , robust
PAN={4}, COL={2}
reg price rep78 mpg gear_ratio if price !=. & foreign !=. , robust
PAN={4}, COL={3}
reg weight rep78 mpg gear_ratio if price !=. & foreign !=. & trunk != 5 & ~strpos(make, "Ford") , robust
PAN={4}, COL={4}
reg price rep78 mpg weight gear_ratio if price !=. & foreign !=. , robust
PAN={4}, COL={5}
reg price rep78 mpg turn gear_ratio if price !=. & foreign !=. & gear_ratio <= 3 , robust
PAN={5}, COL={1}
reg price rep78 gear_ratio if price !=. & foreign !=. , robust
PAN={5}, COL={2}
reg price rep78 gear_ratio if price !=. & foreign !=. , robust
PAN={5}, COL={3}
reg weight rep78 gear_ratio if price !=. & foreign !=. & trunk != 5 & ~strpos(make, "Ford") , robust
PAN={5}, COL={4}
reg price rep78 weight gear_ratio if price !=. & foreign !=. , robust
PAN={5}, COL={5}
reg price rep78 turn gear_ratio if price !=. & foreign !=. & gear_ratio <= 3 , robust
PAN={6}, COL={1}
reg mpg rep78 gear_ratio if price !=. & foreign !=. , robust
PAN={6}, COL={2}
reg mpg rep78 gear_ratio if price !=. & foreign !=. , robust
PAN={6}, COL={3}
reg mpg rep78 gear_ratio if price !=. & foreign !=. & trunk != 5 & ~strpos(make, "Ford") , robust
PAN={6}, COL={4}
reg mpg rep78 weight gear_ratio if price !=. & foreign !=. , robust
PAN={6}, COL={5}
reg mpg rep78 turn gear_ratio if price !=. & foreign !=. & gear_ratio <= 3 , robust
90.
91. ////////////////////////////////////////////
> ///--- D. Run Regressions
> ////////////////////////////////////////////
>
92.     eststo clear
93.
94.     global it_reg_ctr = 0
95.     ///--- Loop over panels
>     foreach it_pan_ctr of numlist 1(1)$it_pan_cnt {
2.
96.         ///--- Counters
>         global it_pan_ctr "`it_pan_ctr'"
3.
97.         ///--- Model Store Name
>         global st_cur_sm_stor "smd_${it_pan_ctr}_m"
4.         global ${st_cur_sm_stor} ""
5.
98.         ///--- Loop over regression columns
>         foreach it_col_ctr of numlist 1(1)$it_col_cnt {
6.
99.             ///--- Counters
>             global it_col_ctr "`it_col_ctr'"
7.
100.             global it_reg_ctr = ${it_reg_ctr} + 1
8.             global st_cur_srg_name "srg_pan_${it_pan_ctr}_col_${it_col_ctr}"
9.
101.             ///--- Regression String Name
>             di "PAN=${it_pan_ctr}, COL=${it_col_ctr}, ${st_cur_srg_name}"
10.             di `"$${st_cur_srg_name}"'
11.
102.             ///--- Reset Strings to Default Always
>             global slb_col_u "${slb_col}"
12.
103.             ///--- Regress
>             capture $quiornot {
13.                 eststo m${it_reg_ctr}, title("${slb_col_u}") : ${st_cur_srg_name}
14.             }
15.             if _rc!=0 {
16.                 ///--- This means this this regression failed, proceed with empty col
>                 * Generate a fake observation to create a new estimated model
104.                 * Then replace the observation N by setting it to 0, otherwise N = 1
105.                 capture drop aaa
17.                 gen aaa = 0 if _n == 1
18.                 eststo m${it_reg_ctr}, title("${slb_col_u}") : estpost tabstat aaa , statistics(n) c(s
> )
19.                 estadd scalar N = 0, replace
20.             }
21.
106.             ///--- Estadd Controls
>             foreach st_scalar_name in $stc_sca {
107.                 estadd local ${st_scalar_name} e(${st_scalar_name})
108.             }
109.
110.             ///--- Track Regression Store
>             global $st_cur_sm_stor "${st_cur_sm_stor} m${it_reg_ctr}"
22.         }
23.     }
PAN={1}, COL={1}, srg_pan_1_col_1
reg price rep78 mpg headroom trunk gear_ratio if price !=. & foreign !=. & foreign == 0 , robust
PAN={1}, COL={2}, srg_pan_1_col_2
reg price rep78 mpg headroom trunk gear_ratio if price !=. & foreign !=. & foreign == 0 , robust
PAN={1}, COL={3}, srg_pan_1_col_3
reg weight rep78 mpg headroom trunk gear_ratio if price !=. & foreign !=. & foreign == 0 & trunk != 5 & ~strpos(make, "F
> ord") , robust
PAN={1}, COL={4}, srg_pan_1_col_4
reg price rep78 mpg headroom trunk weight gear_ratio if price !=. & foreign !=. & foreign == 0 , robust
PAN={1}, COL={5}, srg_pan_1_col_5
reg price rep78 mpg headroom trunk turn gear_ratio if price !=. & foreign !=. & foreign == 0 & gear_ratio <= 3 , robust
PAN={2}, COL={1}, srg_pan_2_col_1
reg price rep78 gear_ratio if price !=. & foreign !=. & foreign == 1 , robust
PAN={2}, COL={2}, srg_pan_2_col_2
reg price rep78 gear_ratio if price !=. & foreign !=. & foreign == 1 , robust
PAN={2}, COL={3}, srg_pan_2_col_3
reg weight rep78 gear_ratio if price !=. & foreign !=. & foreign == 1 & trunk != 5 & ~strpos(make, "Ford") , robust
PAN={2}, COL={4}, srg_pan_2_col_4
reg price rep78 weight gear_ratio if price !=. & foreign !=. & foreign == 1 , robust

```

PAN={2}, COL={5}, srg_pan_2_col_5
reg price rep78 turn gear_ratio if price !=. & foreign !=. & foreign == 1 & gear_ratio <= 3 , robust
(73 missing values generated)

Summary statistics: count
for variables: aaa

	e(count)
aaa	1

added scalar:

```

e(N) = 0
PAN={3}, COL={1}, srg_pan_3_col_1
reg mpg rep78 gear_ratio if price !=. & foreign !=. & length >= 190 , robust
PAN={3}, COL={2}, srg_pan_3_col_2
reg mpg rep78 gear_ratio if price !=. & foreign !=. & length >= 190 , robust
PAN={3}, COL={3}, srg_pan_3_col_3
reg mpg rep78 gear_ratio if price !=. & foreign !=. & length >= 190 & trunk != 5 & ~strpos(make, "Ford") , robust
PAN={3}, COL={4}, srg_pan_3_col_4
reg mpg rep78 weight gear_ratio if price !=. & foreign !=. & length >= 190 , robust
PAN={3}, COL={5}, srg_pan_3_col_5
reg mpg rep78 turn gear_ratio if price !=. & foreign !=. & length >= 190 & gear_ratio <= 3 , robust
PAN={4}, COL={1}, srg_pan_4_col_1
reg price rep78 mpg gear_ratio if price !=. & foreign !=. , robust
PAN={4}, COL={2}, srg_pan_4_col_2
reg price rep78 mpg gear_ratio if price !=. & foreign !=. , robust
PAN={4}, COL={3}, srg_pan_4_col_3
reg weight rep78 mpg gear_ratio if price !=. & foreign !=. & trunk != 5 & ~strpos(make, "Ford") , robust
PAN={4}, COL={4}, srg_pan_4_col_4
reg price rep78 mpg weight gear_ratio if price !=. & foreign !=. , robust
PAN={4}, COL={5}, srg_pan_4_col_5
reg price rep78 mpg turn gear_ratio if price !=. & foreign !=. & gear_ratio <= 3 , robust
PAN={5}, COL={1}, srg_pan_5_col_1
reg price rep78 gear_ratio if price !=. & foreign !=. , robust
PAN={5}, COL={2}, srg_pan_5_col_2
reg price rep78 gear_ratio if price !=. & foreign !=. , robust
PAN={5}, COL={3}, srg_pan_5_col_3
reg weight rep78 gear_ratio if price !=. & foreign !=. & trunk != 5 & ~strpos(make, "Ford") , robust
PAN={5}, COL={4}, srg_pan_5_col_4
reg price rep78 weight gear_ratio if price !=. & foreign !=. , robust
PAN={5}, COL={5}, srg_pan_5_col_5
reg price rep78 turn gear_ratio if price !=. & foreign !=. & gear_ratio <= 3 , robust
PAN={6}, COL={1}, srg_pan_6_col_1
reg mpg rep78 gear_ratio if price !=. & foreign !=. , robust
PAN={6}, COL={2}, srg_pan_6_col_2
reg mpg rep78 gear_ratio if price !=. & foreign !=. , robust
PAN={6}, COL={3}, srg_pan_6_col_3
reg mpg rep78 gear_ratio if price !=. & foreign !=. & trunk != 5 & ~strpos(make, "Ford") , robust
PAN={6}, COL={4}, srg_pan_6_col_4
reg mpg rep78 weight gear_ratio if price !=. & foreign !=. , robust
PAN={6}, COL={5}, srg_pan_6_col_5
reg mpg rep78 turn gear_ratio if price !=. & foreign !=. & gear_ratio <= 3 , robust
```

```

111
112 di "${st_cur_sm_stor}"
    m26 m27 m28 m29 m30

113
114 ///--- Regression Panel String list
    > foreach it_pan_ctr of numlist 1(1)$it_pan_cnt {
1.      global it_pan_ctr "`it_pan_ctr'"
2.      global st_cur_sm_stor "smd_${it_pan_ctr}_m"
3.      di "${st_cur_sm_stor}"
4.
5.    }
smd_1_m
smd_2_m
smd_3_m
smd_4_m
smd_5_m
smd_6_m

115
116 ///////////////////////////////////////////
    > ///--- E. Show Results
    > ///////////////////////////////////////////
    >
117     foreach it_pan_ctr of numlist 1(1)$it_pan_cnt {
118       global it_pan_ctr "`it_pan_ctr'"
119       global slb_pan_u "${slb_pan}"
120       global slb_eso_u "${slb_eso}"
121       global svr_kep_u "${svr_kep} ${svr_kep_pan_${it_pan_ctr}}"
122       di ``esttab ${smd_${it_pan_ctr}_m}, title("${slb_pan_u}") keep(${svr_kep_u}) order(${svr_kep_u}) ${slb_eso_
> o_u}""
1.      esttab ${smd_${it_pan_ctr}_m}, title("${slb_pan_u}") keep(${svr_kep_u}) order(${svr_kep_u}) ${slb_eso_
> u}
2.    }
esttab m1 m2 m3 m4 m5, title("current panel results") keep(rep78 mpg headroom trunk turn) order(rep78 mpg headroom trunk
> turn) label stats(N r2 rank)
```

current panel results

	(1) Price	(2) Price	(3) Weigh..)	(4) Price	(5) Price
Repair Record 1978	369.8 (0.98)	369.8 (0.98)	45.50 (1.11)	279.8 (0.76)	271.9 (0.54)
Mileage (mpg)	-213.9 (-1.88)	-213.9 (-1.88)	-97.73*** (-6.30)	156.3 (0.83)	-163.3 (-0.73)
Headroom (in.)	-498.4 (-1.24)	-498.4 (-1.24)	-80.08 (-1.37)	-320.1 (-0.99)	-501.3 (-0.87)
Trunk space (.. ft.)	35.43 (0.26)	35.43 (0.26)	26.71 (1.40)	-74.57 (-0.60)	34.19 (0.20)
Turn Circle (ft.)					120.8 (0.64)
N	48	48	46	48	37
r2	0.432	0.432	0.803	0.562	0.451
rank	6	6	6	7	7

t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001
esttab m6 m7 m8 m9 m10, title("current panel results") keep(rep78) order(rep78) label stats(N r2 rank)

current panel results

	(1) Price	(2) Price	(3) Weigh..)	(4) Price	(5)
Repair Record 1978	182.2 (0.31)	182.2 (0.31)	50.78 (0.74)	-356.9 (-0.99)	
N	21	21	20	21	0
r2	0.0891	0.0891	0.400	0.735	
rank	3	3	3	4	0

t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001
esttab m11 m12 m13 m14 m15, title("current panel results") keep(rep78) order(rep78) label stats(N r2 rank)

current panel results

	(1) Mileage (m~)	(2) Mileage (m~)	(3) Mileage (m~)	(4) Mileage (m~)	(5) Mileage (m~)
Repair Record 1978	-0.297 (-0.64)	-0.297 (-0.64)	-0.297 (-0.64)	-0.0521 (-0.12)	-0.935 (-1.62)
N	36	36	36	36	31
r2	0.174	0.174	0.174	0.503	0.431
rank	3	3	3	4	4

t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001
esttab m16 m17 m18 m19 m20, title("current panel results") keep(rep78 mpg turn) order(rep78 mpg turn) label stats(N r2 r
> ank)

current panel results

	(1) Price	(2) Price	(3) Weigh..)	(4) Price	(5) Price
Repair Record 1978	774.6** (3.08)	774.6** (3.08)	-6.772 (-0.12)	795.5** (2.99)	614.0 (1.18)
Mileage (mpg)	-210.6** (-2.93)	-210.6** (-2.93)	-63.16*** (-4.20)	-53.45 (-0.61)	-250.6 (-1.28)

Turn Circle (ft.)					12.54 (0.07)
-------------------	--	--	--	--	-----------------

N	69	69	66	69	38
r2	0.275	0.275	0.774	0.367	0.383
rank	4	4	4	5	5

t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001
esttab m21 m22 m23 m24 m25, title("current panel results") keep(rep78) order(rep78) label stats(N r2 rank)

current panel results					
	(1) Price	(2) Price	(3) Weigh..)	(4) Price	(5) Price
Repair Record 1978	575.2* (2.07)	575.2* (2.07)	-62.11 (-0.84)	766.4** (2.90)	768.2 (1.31)

N	69	69	66	69	38
r2	0.176	0.176	0.648	0.363	0.331
rank	3	3	3	4	4

t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001
esttab m26 m27 m28 m29 m30, title("current panel results") keep(rep78) order(rep78) label stats(N r2 rank)

current panel results					
	(1) Mileage (m~)	(2) Mileage (m~)	(3) Mileage (m~)	(4) Mileage (m~)	(5) Mileage (m~)
Repair Record 1978	0.947 (1.31)	0.947 (1.31)	0.876 (1.20)	0.544 (1.00)	-0.615 (-0.64)

N	69	69	66	69	38
r2	0.452	0.452	0.448	0.657	0.498
rank	3	3	3	4	4

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

123
124 ///
> ///--- F. Log to PDF etc
> ///
>
125 ///--- End Log and to HTML
> log close
 name: <unnamed>
 log: C:\Users\fan\Stata4Econ\reglin\multipanel\allpurpose\allpurpose.smcl
 log type: smcl
closed on: 1 Sep 2019, 16:17:24