```
   -> . use "/Users/imisiaiyetan/Documents/Table10_8.dta"
   (Data on credit ratings of 92 US companies)
   -> . do "/var/folders/13/xkzn5ncx4x12s95bhv8j20qw0000gn/T//SD01174.000000"

 1 . clear all

 2 . set more off

 3 .
 4 . ************Name: Imisi Raphael Aiyetan****************
 5 . ************Course:Econometrics 512*******************
 6 .
 7 . use "/Users/imisiaiyetan/Documents/Table10_8.dta"
   (Data on credit ratings of 92 US companies)

 8 .
 9 . * create treatment variable
10 .
11 .
12 . gen y = marklev

13 .
14 . gen x = booklev

15 .
16 . gen T=0

17 .
18 . replace T=1 if x>0.20
   (624 real changes made)

19 .
20 .
21 . ************************************************
22 . ******* Try 3 different Bandwidths *************
23 . ************************************************
24 . gen h1=0.1

25 . gen h2=0.05

26 . gen h3=0.01

27 .
28 . ************************************************
29 . ******* Kernel Regression with Uniform *********
30 . ******* Kernel *********************************
31 . ************************************************
32 . gen kern11u=0

33 . gen kern11l=0

34 . replace kern11u=1 if ((x>0.20)&(x<0.20+h1))
   (241 real changes made)
```

```
35 . replace kern11l=1 if ((x<0.20)&(x>0.20-h1))
   (208 real changes made)

36 . reg y [pweight=kern11u]
   (sum of wgt is   2.4100e+02)

   Linear regression                               Number of obs =     241
                                                   F(  0,   240) =    0.00
                                                   Prob > F      =       .
                                                   R-squared     =  0.0000
                                                   Root MSE      =   .0963

------------------------------------------------------------------------------
             |               Robust
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .2150475   .0062031    34.67   0.000     .2028281    .2272669
------------------------------------------------------------------------------

37 . predict b011u
   (option xb assumed; fitted values)

38 . reg y [pweight=kern11l]
   (sum of wgt is   2.0800e+02)

   Linear regression                               Number of obs =     208
                                                   F(  0,   207) =    0.00
                                                   Prob > F      =       .
                                                   R-squared     =  0.0000
                                                   Root MSE      =   .06921

------------------------------------------------------------------------------
             |               Robust
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .1253112   .0047988    26.11   0.000     .1158503     .134772
------------------------------------------------------------------------------

39 . predict b011l
   (option xb assumed; fitted values)

40 . gen est11=b011u-b011l

41 .
42 . gen kern12u=0

43 . gen kern12l=0

44 . replace kern12u=1 if ((x>0.20)&(x<0.20+h2))
   (122 real changes made)

45 . replace kern12l=1 if ((x<0.20)&(x>0.20-h2))
   (118 real changes made)
```

```
46 . reg y [pweight=kern12u]
   (sum of wgt is   1.2200e+02)

   Linear regression                               Number of obs =     122
                                                   F(  0,   121) =    0.00
                                                   Prob > F      =       .
                                                   R-squared     =  0.0000
                                                   Root MSE      =  .09012

------------------------------------------------------------------------------
             |               Robust
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |    .195054   .0081592    23.91   0.000     .1789008    .2112072
------------------------------------------------------------------------------

47 . predict b012u
   (option xb assumed; fitted values)

48 . reg y [pweight=kern12l]
   (sum of wgt is   1.1800e+02)

   Linear regression                               Number of obs =     118
                                                   F(  0,   117) =    0.00
                                                   Prob > F      =       .
                                                   R-squared     =  0.0000
                                                   Root MSE      =  .07821

------------------------------------------------------------------------------
             |               Robust
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .1473653   .0071995    20.47   0.000     .1331071    .1616234
------------------------------------------------------------------------------

49 . predict b012l
   (option xb assumed; fitted values)

50 . gen est12=b012u-b012l

51 .
52 . gen kern13u=0

53 . gen kern13l=0

54 . replace kern13u=1 if ((x>0.20)&(x<0.20+h3))
   (23 real changes made)

55 . replace kern13l=1 if  ((x<0.20)&(x>0.20-h3))
   (21 real changes made)

56 . reg y [pweight=kern13u]
   (sum of wgt is   2.3000e+01)
```

```
Linear regression                               Number of obs =        23
                                                F(  0,    22) =      0.00
                                                Prob > F      =         .
                                                R-squared     =    0.0000
                                                Root MSE      =    .10235

------------------------------------------------------------------------------
             |               Robust
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .1687868   .0213415     7.91   0.000     .1245273    .2130463
------------------------------------------------------------------------------

57 . predict b013u
   (option xb assumed; fitted values)

58 . reg y [pweight=kern13l]
   (sum of wgt is   2.1000e+01)

Linear regression                               Number of obs =        21
                                                F(  0,    20) =      0.00
                                                Prob > F      =         .
                                                R-squared     =    0.0000
                                                Root MSE      =    .08493

------------------------------------------------------------------------------
             |               Robust
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .1734671   .0185329     9.36   0.000      .134808    .2121261
------------------------------------------------------------------------------

59 . predict b013l
   (option xb assumed; fitted values)

60 . gen est13=b013u-b013l

61 .
62 .
63 .
64 . ***********************************************
65 . ******* Kernel Regression with Epanechnikov ****
66 . ******* Kernel *********************************
67 . ***********************************************
68 . gen kern21u=0

69 . gen kern21l=0

70 . gen dx1=(x-0.20)/h1

71 . replace kern21u=(1-dx1*dx1) if ((x>0.20)&(x<0.20+h1))
   (241 real changes made)

72 . replace kern21l=(1-dx1*dx1) if ((x<0.20)&(x>0.20-h1))
```

```
(208 real changes made)

73 . reg y [pweight=kern21u]
(sum of wgt is   1.6482e+02)

Linear regression                               Number of obs =     241
                                                F(  0,   240) =    0.00
                                                Prob > F      =       .
                                                R-squared     =  0.0000
                                                Root MSE      =  .09099

------------------------------------------------------------------------------
             |               Robust
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .2038063   .0063043    32.33   0.000     .1913875    .2162251
------------------------------------------------------------------------------

74 . predict b021u
(option xb assumed; fitted values)

75 . reg y [pweight=kern21l]
(sum of wgt is   1.4868e+02)

Linear regression                               Number of obs =     208
                                                F(  0,   207) =    0.00
                                                Prob > F      =       .
                                                R-squared     =  0.0000
                                                Root MSE      =  .07401

------------------------------------------------------------------------------
             |               Robust
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .1350185   .0056865    23.74   0.000     .1238076    .1462295
------------------------------------------------------------------------------

76 . predict b021l
(option xb assumed; fitted values)

77 . gen est21=b021u-b021l

78 .
79 . gen kern22u=0

80 . gen kern22l=0

81 . gen dx2=(x-0.20)/h2

82 . replace kern22u=(1-dx2*dx2) if ((x>0.20)&(x<0.20+h2))
(122 real changes made)

83 . replace kern22l=(1-dx2*dx2) if  ((x<0.20)&(x>0.20-h2))
(118 real changes made)
```

```
84 . reg y [pweight=kern22u]
   (sum of wgt is   8.0844e+01)

   Linear regression                               Number of obs =     122
                                                   F(  0,   121) =    0.00
                                                   Prob > F      =       .
                                                   R-squared     =  0.0000
                                                   Root MSE      =  .09361

------------------------------------------------------------------------------
           y |      Coef.   Robust Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .1930403   .0094835    20.36   0.000     .1742653    .2118153
------------------------------------------------------------------------------

85 . predict b022u
   (option xb assumed; fitted values)

86 . reg y [pweight=kern22l]
   (sum of wgt is   7.6206e+01)

   Linear regression                               Number of obs =     118
                                                   F(  0,   117) =    0.00
                                                   Prob > F      =       .
                                                   R-squared     =  0.0000
                                                   Root MSE      =  .08196

------------------------------------------------------------------------------
           y |      Coef.   Robust Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .1564504   .0084765    18.46   0.000     .1396632    .1732377
------------------------------------------------------------------------------

87 . predict b022l
   (option xb assumed; fitted values)

88 . gen est22=b022u-b022l

89 .
90 . gen kern23u=0

91 . gen kern23l=0

92 . gen dx3=(x-0.20)/h3

93 . replace kern23u=(1-dx3*dx3) if  ((x>0.20)&(x<0.20+h3))
   (23 real changes made)

94 . replace kern23l=(1-dx3*dx3) if ((x<0.20)&(x>0.20-h3))
   (21 real changes made)
```

```
 95 . reg y [pweight=kern23u]
   (sum of wgt is   1.4494e+01)

   Linear regression                                      Number of obs =      23
                                                          F(  0,    22) =    0.00
                                                          Prob > F      =       .
                                                          R-squared     =  0.0000
                                                          Root MSE      =  .11252

------------------------------------------------------------------------------
             |               Robust
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |    .173707   .0272644     6.37   0.000     .1171642    .2302498
------------------------------------------------------------------------------

 96 . predict b023u
   (option xb assumed; fitted values)

 97 . reg y [pweight=kern23l]
   (sum of wgt is   1.4227e+01)

   Linear regression                                      Number of obs =      21
                                                          F(  0,    20) =    0.00
                                                          Prob > F      =       .
                                                          R-squared     =  0.0000
                                                          Root MSE      =  .09417

------------------------------------------------------------------------------
             |               Robust
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .1790257   .0239453     7.48   0.000     .1290766    .2289747
------------------------------------------------------------------------------

 98 . predict b023l
   (option xb assumed; fitted values)

 99 . gen est23=b023u-b023l

100 . sum est11 est12 est13 est21 est22 est23

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
       est11 |       921    .0897364           0   .0897364   .0897364
       est12 |       921    .0476887           0   .0476887   .0476887
       est13 |       921   -.0046803           0  -.0046803  -.0046803
       est21 |       921    .0687878           0   .0687878   .0687878
       est22 |       921    .0365899           0   .0365899   .0365899
-------------+--------------------------------------------------------
       est23 |       921   -.0053187           0  -.0053187  -.0053187

101 . *pause
102 .
```

```
103 .
104 . ***********************************************
105 . ******* Local Linear Regression with ***********
106 . ******* different Kernels and bandwidths *******
107 . ***********************************************
108 . reg y  x [pweight=kern11u]
(sum of wgt is   2.4100e+02)

Linear regression                               Number of obs =     241
                                                F(  1,   239) =   14.13
                                                Prob > F      =  0.0002
                                                R-squared     =  0.0700
                                                Root MSE      =  .09306

------------------------------------------------------------------------------
             |               Robust
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
           x |   .9203197   .2448655     3.76   0.000     .4379495    1.40269
       _cons |  -.0140803   .0607797    -0.23   0.817    -.1338127    .1056521
------------------------------------------------------------------------------

109 . predict b031u
(option xb assumed; fitted values)

110 . reg y x [pweight=kern11l]
(sum of wgt is   2.0800e+02)

Linear regression                               Number of obs =     208
                                                F(  1,   206) =   40.39
                                                Prob > F      =  0.0000
                                                R-squared     =  0.1715
                                                Root MSE      =  .06315

------------------------------------------------------------------------------
             |               Robust
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
           x |    1.05424   .1658895     6.36   0.000     .7271813    1.381299
       _cons |  -.0370372   .0234678    -1.58   0.116     -.083305    .0092307
------------------------------------------------------------------------------

111 . predict b031l
(option xb assumed; fitted values)

112 . gen est31=b031u-b031l

113 . reg y  x [pweight=kern12u]
(sum of wgt is   1.2200e+02)

Linear regression                               Number of obs =     122
                                                F(  1,   120) =    0.41
                                                Prob > F      =  0.5222
                                                R-squared     =  0.0039
```

```
                                                      Root MSE      =   .09032
------------------------------------------------------------------------------
             |               Robust
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
           x |   .4050032   .6309373     0.64   0.522    -.8442089    1.654215
       _cons |    .103705   .1442421     0.72   0.474    -.1818843    .3892943
------------------------------------------------------------------------------

114 . predict b032u
    (option xb assumed; fitted values)

115 . reg y x [pweight=kern12l]
    (sum of wgt is   1.1800e+02)

    Linear regression                                 Number of obs =     118
                                                      F(  1,   116) =    8.23
                                                      Prob > F      =  0.0049
                                                      R-squared     =  0.0639
                                                      Root MSE      =  .07599

------------------------------------------------------------------------------
             |               Robust
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
           x |   1.343275   .4682569     2.87   0.005     .4158332    2.270717
       _cons |  -.0865034   .0799214    -1.08   0.281    -.2447978     .071791
------------------------------------------------------------------------------

116 . predict b032l
    (option xb assumed; fitted values)

117 . gen est32=b032u-b032l

118 . reg y  x [pweight=kern13u]
    (sum of wgt is   2.3000e+01)

    Linear regression                                 Number of obs =      23
                                                      F(  1,    21) =    0.45
                                                      Prob > F      =  0.5100
                                                      R-squared     =  0.0156
                                                      Root MSE      =  .10394

------------------------------------------------------------------------------
             |               Robust
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
           x |  -4.458391   6.651958    -0.67   0.510    -18.29189    9.375113
       _cons |   1.084519   1.375223     0.79   0.439    -1.775413    3.944451
------------------------------------------------------------------------------

119 . predict b033u
    (option xb assumed; fitted values)
```

```
120 . reg y x [pweight=kern13l]
    (sum of wgt is   2.1000e+01)

    Linear regression                               Number of obs =      21
                                                    F(  1,    19) =    0.82
                                                    Prob > F      =  0.3773
                                                    R-squared     =  0.0645
                                                    Root MSE      =  .08428

------------------------------------------------------------------------------
           y |      Coef.   Robust Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
           x |     6.98582    7.727044     0.90   0.377    -9.187069    23.15871
       _cons |    -1.190066    1.499157    -0.79   0.437    -4.327838    1.947707
------------------------------------------------------------------------------

121 . predict b033l
    (option xb assumed; fitted values)

122 . gen est33=b033u-b033l

123 .
124 . reg y  x [pweight=kern21u]
    (sum of wgt is   1.6482e+02)

    Linear regression                               Number of obs =     241
                                                    F(  1,   239) =    6.37
                                                    Prob > F      =  0.0123
                                                    R-squared     =  0.0311
                                                    Root MSE      =  .08975

------------------------------------------------------------------------------
           y |      Coef.   Robust Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
           x |      .68411    .2711325     2.52   0.012     .1499955    1.218225
       _cons |    .0410815    .0670426     0.61   0.541    -.0909883    .1731514
------------------------------------------------------------------------------

125 . predict b041u
    (option xb assumed; fitted values)

126 . reg y x [pweight=kern21l]
    (sum of wgt is   1.4868e+02)

    Linear regression                               Number of obs =     208
                                                    F(  1,   206) =   31.28
                                                    Prob > F      =  0.0000
                                                    R-squared     =  0.1413
                                                    Root MSE      =  .06875

-------------+
```

y	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
x	1.204566	.2153837	5.59	0.000	.7799264	1.629205
_cons	-.0623406	.0322479	-1.93	0.055	-.1259188	.0012376

```
127 . predict b041l
    (option xb assumed; fitted values)

128 . gen est41=b041u-b041l

129 . reg y  x [pweight=kern22u]
    (sum of wgt is   8.0844e+01)

    Linear regression                               Number of obs =     122
                                                    F(  1,   120) =    0.35
                                                    Prob > F      =  0.5531
                                                    R-squared     =  0.0034
                                                    Root MSE      =  .09384
```

y	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
x	.4501515	.7568654	0.59	0.553	-1.048389	1.948692
_cons	.0940814	.1712113	0.55	0.584	-.244905	.4330679

```
130 . predict b042u
    (option xb assumed; fitted values)

131 . reg y x [pweight=kern22l]
    (sum of wgt is   7.6206e+01)

    Linear regression                               Number of obs =     118
                                                    F(  1,   116) =    3.88
                                                    Prob > F      =  0.0512
                                                    R-squared     =  0.0375
                                                    Root MSE      =  .08076
```

y	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
x	1.267261	.6431098	1.97	0.051	-.0064989	2.541021
_cons	-.0727375	.113401	-0.64	0.523	-.2973425	.1518674

```
132 . predict b042l
    (option xb assumed; fitted values)

133 . gen est42=b042u-b042l
```

```
134 . reg y  x [pweight=kern23u]
    (sum of wgt is   1.4494e+01)

    Linear regression                               Number of obs =      23
                                                    F(  1,    21) =    1.76
                                                    Prob > F      =  0.1983
                                                    R-squared     =  0.0308
                                                    Root MSE      =  .11338

------------------------------------------------------------------------------
             |               Robust
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
           x |   -9.20995   6.932493    -1.33   0.198    -23.62686    5.206959
       _cons |   2.052561   1.429212     1.44   0.166    -.9196474     5.02477
------------------------------------------------------------------------------

135 . predict b043u
    (option xb assumed; fitted values)

136 . reg y x [pweight=kern23l]
    (sum of wgt is   1.4227e+01)

    Linear regression                               Number of obs =      21
                                                    F(  1,    19) =    1.60
                                                    Prob > F      =  0.2210
                                                    R-squared     =  0.1307
                                                    Root MSE      =  .09008

------------------------------------------------------------------------------
             |               Robust
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
           x |   14.07736   11.12405     1.27   0.221    -9.205543    37.36027
       _cons |  -2.587918   2.169832    -1.19   0.248    -7.129428    1.953591
------------------------------------------------------------------------------

137 . predict b043l
    (option xb assumed; fitted values)

138 . gen est43=b043u-b043l

139 . sum est31 est32 est33 est41 est42 est43

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
       est31 |        921   -.0163069    .0232397  -.1108574   .0229568
       est32 |        921   -.0848805     .162822   -.747319   .1902084
       est33 |        921   -1.080706    1.985959  -9.160547   2.274585
       est41 |        921   -.0491685    .0903167  -.4166204   .1034222
       est42 |        921   -.0727467    .1417962  -.6496423    .166819
-------------+---------------------------------------------------------
       est43 |        921   -2.187053    4.041139  -18.62836    4.64048
```

```
140 . *pause
141 .
142 .
143 . ***********************************************
144 . ******* Polynomial Regression Approach *********
145 . ***********************************************
146 . gen x2=x*x

147 . gen x3=x*x2

148 . gen x4=x*x3

149 . gen x5=x*x4

150 . gen x6=x*x5

151 . gen x7=x*x6

152 . gen x8=x*x7

153 . gen gt5=0

154 . replace gt5=1 if x>0.20
    (624 real changes made)

155 . gen xgt=(x-0.20)*gt5

156 . gen x2gt=xgt*xgt

157 . gen x3gt=x2gt*xgt

158 . gen x4gt=x3gt*xgt

159 . gen x5gt=x4gt*xgt

160 . gen x6gt=x5gt*xgt

161 . gen x7gt=x6gt*xgt

162 . gen x8gt=x7gt*xgt

163 .
164 .
165 . reg y T x
```

Source	SS	df	MS	Number of obs =	921
				F(2, 918) =	678.59
Model	19.3904547	2	9.69522736	Prob > F =	0.0000
Residual	13.115692	918	.014287246	R-squared =	0.5965
				Adj R-squared =	0.5956
Total	32.5061467	920	.035332768	Root MSE =	.11953

y	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]

T	.0399137	.0115391	3.46	0.001	.0172678	.0625597
x	.7594098	.031098	24.42	0.000	.6983783	.8204412
_cons	.0050372	.0078972	0.64	0.524	-.0104614	.0205359

166 . reg y T x x2 x3

Source	SS	df	MS		
Model	19.8796265	4	4.96990663	Number of obs =	921
Residual	12.6265202	916	.013784411	F(4, 916) =	360.55
				Prob > F =	0.0000
Total	32.5061467	920	.035332768	R-squared =	0.6116
				Adj R-squared =	0.6099
				Root MSE =	.11741

y	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
T	-.0027617	.0148399	-0.19	0.852	-.0318859	.0263626
x	.9139457	.1764966	5.18	0.000	.5675611	1.26033
x2	.4562413	.416406	1.10	0.274	-.3609793	1.273462
x3	-.7874873	.3068065	-2.57	0.010	-1.389613	-.185362
_cons	-.0197211	.0167601	-1.18	0.240	-.0526137	.0131716

167 . reg y T x x2 x3 x4

Source	SS	df	MS		
Model	20.0944389	5	4.01888779	Number of obs =	921
Residual	12.4117078	915	.013564708	F(5, 915) =	296.28
				Prob > F =	0.0000
Total	32.5061467	920	.035332768	R-squared =	0.6182
				Adj R-squared =	0.6161
				Root MSE =	.11647

y	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
T	-.0245246	.0157042	-1.56	0.119	-.055345	.0062958
x	.1796472	.2543677	0.71	0.480	-.3195646	.678859
x2	4.895604	1.189589	4.12	0.000	2.560963	7.230245
x3	-9.08992	2.108402	-4.31	0.000	-13.22779	-4.952054
x4	4.739105	1.190891	3.98	0.000	2.401911	7.076299
_cons	.0107317	.0183026	0.59	0.558	-.0251882	.0466517

168 . reg y T x x2 x3 x4 x5 x6

Source	SS	df	MS		
Model	20.1241064	7	2.87487234	Number of obs =	921
Residual	12.3820404	913	.013561928	F(7, 913) =	211.98
				Prob > F =	0.0000
Total	32.5061467	920	.035332768	R-squared =	0.6191
				Adj R-squared =	0.6162
				Root MSE =	.11646

y	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
T	-.0081037	.0197376	-0.41	0.681	-.0468401	.0306327
x	.8821782	.7320274	1.21	0.228	-.5544736	2.31883
x2	-1.813844	7.545598	-0.24	0.810	-16.62257	12.99489
x3	13.68121	30.79529	0.44	0.657	-46.75657	74.11898
x4	-29.90848	60.01457	-0.50	0.618	-147.691	87.87406
x5	23.64272	55.55862	0.43	0.671	-85.39471	132.6802
x6	-5.724878	19.55526	-0.29	0.770	-44.10336	32.65361
_cons	-.0039889	.022112	-0.18	0.857	-.0473852	.0394075

```
169 . reg y T x x2 x3 x4 x5 x6 x7 x8
note: x6 omitted because of collinearity
```

Source	SS	df	MS		
Model	20.1243003	8	2.51553753	Number of obs	= 921
Residual	12.3818464	912	.013576586	F(8, 912)	= 185.28
				Prob > F	= 0.0000
Total	32.5061467	920	.035332768	R-squared	= 0.6191
				Adj R-squared	= 0.6158
				Root MSE	= .11652

y	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
T	-.0079011	.0198113	-0.40	0.690	-.0467821	.03098
x	.8423546	.8978142	0.94	0.348	-.9196673	2.604376
x2	-1.198446	10.62778	-0.11	0.910	-22.05619	19.6593
x3	9.962498	51.88979	0.19	0.848	-91.87478	111.7998
x4	-19.46871	121.1132	-0.16	0.872	-257.1617	218.2243
x5	10.03375	121.2213	0.08	0.934	-227.8713	247.9388
x6	0	(omitted)				
x7	2.988187	83.52012	0.04	0.971	-160.9258	166.9022
x8	-2.404081	41.3214	-0.06	0.954	-83.50015	78.69199
_cons	-.0035466	.0230087	-0.15	0.878	-.0487027	.0416095

```
170 . reg y T x xgt
```

Source	SS	df	MS		
Model	19.4052943	3	6.46843142	Number of obs	= 921
Residual	13.1008525	917	.014286644	F(3, 917)	= 452.76
				Prob > F	= 0.0000
Total	32.5061467	920	.035332768	R-squared	= 0.5970
				Adj R-squared	= 0.5957
				Root MSE	= .11953

y	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
T	.0321228	.0138413	2.32	0.021	.0049585	.0592871
x	.87751	.1199793	7.31	0.000	.642044	1.112976
xgt	-.1266054	.1242245	-1.02	0.308	-.3704027	.1171919
_cons	-.009304	.016136	-0.58	0.564	-.0409718	.0223638

```
------------------------------------------------------------------------------
```

```
171 . reg y T x x2 x3 x4 xgt x2gt x3gt
```

```
      Source |       SS       df       MS              Number of obs =     921
-------------+------------------------------           F(  8,   912) =  185.83
       Model |  20.1467472     8  2.5183434            Prob > F      =  0.0000
    Residual |  12.3593995   912  .013551973           R-squared     =  0.6198
-------------+------------------------------           Adj R-squared =  0.6164
       Total |  32.5061467   920  .035332768           Root MSE      =  .11641

------------------------------------------------------------------------------
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
           T |  -.0102507   .0271929    -0.38   0.706    -.0636187    .0431172
           x |   .9171689   1.100133     0.83   0.405    -1.241918    3.076255
          x2 |  -3.108013   12.96923    -0.24   0.811    -28.56102      22.345
          x3 |   13.85866    42.1155     0.33   0.742    -68.79589    96.51322
          x4 |   10.28156   3.184033     3.23   0.001     4.032674    16.53044
         xgt |  -1.063083   1.091396    -0.97   0.330    -3.205023    1.078858
        x2gt |  -3.269304   12.78544    -0.26   0.798    -28.36161      21.823
        x3gt |  -35.62301   42.49468    -0.84   0.402    -119.0217    47.77572
       _cons |  -.0025342   .0237889    -0.11   0.915    -.0492215     .044153
------------------------------------------------------------------------------
```

```
172 . reg y T x x2 x3 x4 xgt x2gt x3gt x4gt
```

```
      Source |       SS       df       MS              Number of obs =     921
-------------+------------------------------           F(  9,   911) =  165.03
       Model |  20.148118     9  2.23867978            Prob > F      =  0.0000
    Residual |  12.3580287   911  .013565344           R-squared     =  0.6198
-------------+------------------------------           Adj R-squared =  0.6161
       Total |  32.5061467   920  .035332768           Root MSE      =  .11647

------------------------------------------------------------------------------
           y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
           T |  -.0156238   .0320293    -0.49   0.626    -.0784837     .047236
           x |   .3191323   2.179617     0.15   0.884    -3.958522    4.596787
          x2 |   11.12007   46.60124     0.24   0.811    -80.33819    102.5783
          x3 |  -96.71842   350.3933    -0.28   0.783    -784.3904    590.9535
          x4 |   283.4814   859.4309     0.33   0.742    -1403.213    1970.176
         xgt |  -1.629094   2.088697    -0.78   0.436    -5.728311    2.470124
        x2gt |  -16.72139   44.20833    -0.38   0.705    -103.4834    70.04061
        x3gt |  -143.6004    342.323    -0.42   0.675    -815.4337    528.2329
        x4gt |  -273.2036   859.4369    -0.32   0.751     -1959.91    1413.503
       _cons |   .0008098   .0260217     0.03   0.975    -.0502596    .0518792
------------------------------------------------------------------------------
```

```
173 . reg y T x x2 x3 x4 x5 x6 xgt x2gt x3gt x4gt x5gt x6gt
note: x5gt omitted because of collinearity
note: x6gt omitted because of collinearity

      Source |       SS       df       MS              Number of obs =     921
```

Source	SS	df	MS		
Model	20.1624198	11	1.83294726	F(11, 909)	134.98
Residual	12.3437269	909	.013579458	Prob > F	0.0000
				R-squared	0.6203
				Adj R-squared	0.6157
Total	32.5061467	920	.035332768	Root MSE	.11653

y	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
T	-.0005106	.0352816	-0.01	0.988	-.0697534	.0687322
x	.2866965	2.181177	0.13	0.895	-3.994031	4.567424
x2	12.3607	46.65464	0.26	0.791	-79.20263	103.924
x3	-113.6194	351.2966	-0.32	0.746	-803.0661	575.8273
x4	380.6548	869.5944	0.44	0.662	-1325.991	2087.301
x5	-210.7071	282.7776	-0.75	0.456	-765.6799	344.2657
x6	58.29893	83.0509	0.70	0.483	-104.6949	221.2927
xgt	-2.398233	2.223934	-1.08	0.281	-6.762875	1.966409
x2gt	-5.288408	45.84046	-0.12	0.908	-95.25384	84.67703
x3gt	-183.069	344.9817	-0.53	0.596	-860.1221	493.9841
x4gt	-67.10964	896.9454	-0.07	0.940	-1827.434	1693.215
x5gt	0	(omitted)				
x6gt	0	(omitted)				
_cons	.0009151	.0260356	0.04	0.972	-.0501817	.052012

```
174 . reg y T x x2 x3 x4 x5 x6 x7 x8 xgt x2gt x3gt x4gt x5gt x6gt x7gt x8gt
    note: x6 omitted because of collinearity
    note: x5gt omitted because of collinearity
    note: x6gt omitted because of collinearity
    note: x7gt omitted because of collinearity
    note: x8gt omitted because of collinearity
```

Source	SS	df	MS		
Model	20.1650735	12	1.68042279	Number of obs	921
Residual	12.3410732	908	.01359149	F(12, 908)	123.64
				Prob > F	0.0000
				R-squared	0.6203
Total	32.5061467	920	.035332768	Adj R-squared	0.6153
				Root MSE	.11658

y	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
T	-.0056599	.0369959	-0.15	0.878	-.0782673	.0669475
x	.3670326	2.188096	0.17	0.867	-3.92728	4.661345
x2	9.295352	47.07679	0.20	0.844	-83.09662	101.6873
x3	-71.98743	361.0929	-0.20	0.842	-780.6611	636.6862
x4	142.9083	987.8884	0.14	0.885	-1795.902	2081.718
x5	290.2349	992.0003	0.29	0.770	-1656.645	2237.115
x6	0	(omitted)				
x7	-170.3561	447.0969	-0.38	0.703	-1047.82	707.1074
x8	78.23322	188.6215	0.41	0.678	-291.9516	448.4181
xgt	-2.102376	2.319648	-0.91	0.365	-6.654872	2.450119
x2gt	-14.78146	50.1031	-0.30	0.768	-113.1128	83.54989
x3gt	-164.4257	348.1581	-0.47	0.637	-847.7139	518.8625

```
        x4gt |  -445.7938   1198.341    -0.37   0.710    -2797.633    1906.045
        x5gt |           0  (omitted)
        x6gt |           0  (omitted)
        x7gt |           0  (omitted)
        x8gt |           0  (omitted)
       _cons |   .0006532   .0260525     0.03   0.980    -.0504768    .0517833
-------------+----------------------------------------------------------------

175 .
    end of do-file
    -> .
```