



```
(863 real changes made)
  name: <unnamed>
  log: C:\Users\ramon\Desktop\UZH\Empirical Methods\Problem Sets\Problem Set 2\Stata\log_gm
log type: smcl
opened on: 11 Nov 2019, 17:42:25

1 .
2 . use "C:\Users\ramon\Desktop\UZH\Empirical Methods\Problem Sets\Problem Set 2\Stata\class_size_p
3 .
4 . *Empirical Question
5 .
6 . **a)
7 .
8 . gen big_school = 0
9 . replace big_school = 1 if n_classes > 2
(863 real changes made)

10 .
11 . ***a-i)
12 .
13 . reg mrkgrm classize

      Source |       SS           df          MS      Number of obs   =
             | 1396.59756        1  1396.59756   F(1, 1965)   =
             | 97259.1452       1,965  49.4957482 Prob > F     =
                                         R-squared   =
                                         Adj R-squared   =
                                         Root MSE    =
             | 98655.7428       1,966  50.1809475

      mrkgrm |     Coef.    Std. Err.      t    P>|t| [95% Conf. Interval]
             | .1341112  .0252472    5.31  0.000  .0845971  .1836254
             | 68.6283  .7839904   87.54  0.000  67.09076  70.16584

14 .
15 . outreg2 using "PS2_regressiona.doc", replace ctitle(a-i)
PS2_regressiona.doc
dir : seeout

16 .
17 . ***a-ii)
18 .
19 . reg mrkgrm classize big_school

      Source |       SS           df          MS      Number of obs   =
             | 2068.58052        2  1034.29026   F(2, 1964)   =
             | 96587.1622       1,964  49.1787995 Prob > F     =
                                         R-squared   =
                                         Adj R-squared   =
                                         Root MSE    =
             | 98655.7428       1,966  50.1809475

      mrkgrm |     Coef.    Std. Err.      t    P>|t| [95% Conf. Interval]
             | .1019125  .0266311    3.83  0.000  .0496844  .1541407
             | 1.246412  .3371876    3.70  0.000  .5851293  1.907695
             | 69.06062  .7901793   87.40  0.000  67.51094  70.6103
```

```

20 .
21 . outreg2 using "PS2_regressiona.doc", append ctitle(a-ii)
  PS2 regressiona.doc
  dir : seeout

22 .
23 . **b)
24 .
25 . drop big_school

26 .
27 . ***b-i)
28 .
29 . gen ln_mrkgrm = log(mrkgrm)

30 . reg mrkgrm classize pct_dis

```

Source	SS	df	MS	Number of obs	=	<b>1,967</b>
Model	<b>36025.757</b>	<b>2</b>	<b>18012.8785</b>	F(2, 1964)	=	<b>564.86</b>
Residual	<b>62629.9858</b>	<b>1,964</b>	<b>31.8889948</b>	Prob > F	=	<b>0.0000</b>
				R-squared	=	<b>0.3652</b>
Total	<b>98655.7428</b>	<b>1,966</b>	<b>50.1809475</b>	Adj R-squared	=	<b>0.3645</b>
				Root MSE	=	<b>5.647</b>

  

mrkgrm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
classize	<b>-.0602863</b>	<b>.0211063</b>	<b>-2.86</b>	<b>0.004</b>	<b>-.1016794</b> <b>-.0188931</b>
pct_dis	<b>-.3348571</b>	<b>.0101615</b>	<b>-32.95</b>	<b>0.000</b>	<b>-.3547856</b> <b>-.3149286</b>
_cons	<b>79.05196</b>	<b>.7043112</b>	<b>112.24</b>	<b>0.000</b>	<b>77.67068</b> <b>80.43323</b>

```

31 . outreg2 using "PS2_regressionbi.doc", replace ctitle(normal)
  PS2 regressionbi.doc
  dir : seeout

```

```
32 . reg ln_mrkgrm classize pct_dis
```

Source	SS	df	MS	Number of obs	=	<b>1,967</b>
Model	<b>7.53443573</b>	<b>2</b>	<b>3.76721786</b>	F(2, 1964)	=	<b>573.18</b>
Residual	<b>12.9082879</b>	<b>1,964</b>	<b>.006572448</b>	Prob > F	=	<b>0.0000</b>
Total	<b>20.4427236</b>	<b>1,966</b>	<b>.01039813</b>	R-squared	=	<b>0.3686</b>
				Adj R-squared	=	<b>0.3679</b>
				Root MSE	=	<b>.08107</b>

  

ln_mrkgrm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
classize	<b>-.0007001</b>	<b>.000303</b>	<b>-2.31</b>	<b>0.021</b>	<b>-.0012944</b> <b>-.0001059</b>
pct_dis	<b>-.0048256</b>	<b>.0001459</b>	<b>-33.08</b>	<b>0.000</b>	<b>-.0051117</b> <b>-.0045395</b>
_cons	<b>4.367718</b>	<b>.0101113</b>	<b>431.96</b>	<b>0.000</b>	<b>4.347888</b> <b>4.387548</b>

```

33 . outreg2 using "PS2_regressionbi.doc", append ctitle(log)
PS2 regressionbi.doc
dir : seeout

34 .
35 . ***b-ii)
36 .
37 . **c)
38 .
39 . gen small_size = 0

40 . replace small_size = 1 if classize <= 10
(8 real changes made)

41 .
42 . reg mrkgrm small_size pct_dis

```

Source	SS	df	MS	Number of obs	=	<b>1,967</b>
Model	<b>35817.7919</b>	<b>2</b>	<b>17908.8959</b>	F(2, 1964)	=	<b>559.74</b>
Residual	<b>62837.9509</b>	<b>1,964</b>	<b>31.9948833</b>	Prob > F	=	<b>0.0000</b>
Total	<b>98655.7428</b>	<b>1,966</b>	<b>50.1809475</b>	R-squared	=	<b>0.3631</b>
				Adj R-squared	=	<b>0.3624</b>
				Root MSE	=	<b>5.6564</b>

  

mrkgrm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
small_size	<b>2.559678</b>	<b>2.003923</b>	<b>1.28</b>	<b>0.202</b>	<b>-1.370361</b> <b>6.489718</b>
pct_dis	<b>-.3267693</b>	<b>.0097728</b>	<b>-33.44</b>	<b>0.000</b>	<b>-.3459354</b> <b>-.3076032</b>
_cons	<b>77.09925</b>	<b>.1834885</b>	<b>420.19</b>	<b>0.000</b>	<b>76.73939</b> <b>77.4591</b>

```

43 . outreg2 using "PS2_regressionnc.doc", replace ctitle(c)
PS2 regressionnc.doc
dir : seeout

44 . test _b[small_size]=0
( 1) small_size = 0

      F( 1, 1964) = 1.63
      Prob > F = 0.2016

45 . local sign_ss = sign(_b[small_size])

46 . display "Ho: coef <= 0 p-value = " ttail(r(df_r),`sign_ss'*sqrt(r(F)))
Ho: coef <= 0 p-value = .10081773

47 .
48 . ***c-i)
49 .

```

```

50 . ****Hand- and Stata-Testing!!!
51 .
52 . ***c-ii)
53 .
54 . reg mrkgrm pct_dis

```

Source	SS	df	MS	Number of obs	=	1,967
Model	<b>35765.5896</b>	<b>1</b>	<b>35765.5896</b>	F(1, 1965)	=	<b>1117.49</b>
Residual	<b>62890.1531</b>	<b>1,965</b>	<b>32.005167</b>	Prob > F	=	0.0000
Total	<b>98655.7428</b>	<b>1,966</b>	<b>50.1809475</b>	R-squared	=	0.3625
				Adj R-squared	=	0.3622
				Root MSE	=	5.6573

  

mrkgrm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
pct_dis	<b>-.3267448</b>	<b>.0097743</b>	<b>-33.43</b>	<b>0.000</b>	<b>-.3459139</b>	<b>-.3075757</b>
_cons	<b>77.10933</b>	<b>.1833481</b>	<b>420.56</b>	<b>0.000</b>	<b>76.74975</b>	<b>77.4689</b>

```

55 . outreg2 using "PS2_regressionci.doc", replace ctitle(1)
PS2 regressionci.doc
dir : seeout

```

```
56 . predict residuals1, residuals
```

```

57 .
58 . reg small_size pct_dis

```

Source	SS	df	MS	Number of obs	=	1,967
Model	<b>.00003067</b>	<b>1</b>	<b>.00003067</b>	F(1, 1965)	=	0.01
Residual	<b>7.96743247</b>	<b>1,965</b>	<b>.004054673</b>	Prob > F	=	0.9307
Total	<b>7.96746314</b>	<b>1,966</b>	<b>.004052626</b>	R-squared	=	0.0000
				Adj R-squared	=	-0.0005
				Root MSE	=	.06368

small_size	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
pct_dis	<b>9.57e-06</b>	<b>.00011</b>	<b>0.09</b>	<b>0.931</b>	<b>-.0002062</b>	<b>.0002253</b>
_cons	<b>.0039382</b>	<b>.0020637</b>	<b>1.91</b>	<b>0.056</b>	<b>-.0001091</b>	<b>.0079854</b>

```

59 . outreg2 using "PS2_regressionci.doc", append ctitle(2)
PS2 regressionci.doc
dir : seeout

```

```
60 . predict residuals2, residuals
```

```
61 .
```

```
62 . reg residuals1 residuals2
```

Source	SS	df	MS	Number of obs	=	1,967
Model	<b>52.2022502</b>	<b>1</b>	<b>52.2022502</b>	F(1, 1965)	=	1.63
Residual	<b>62837.9512</b>	<b>1,965</b>	<b>31.9786011</b>	Prob > F	=	0.2015
Total	<b>62890.1534</b>	<b>1,966</b>	<b>31.9888878</b>	R-squared	=	0.0008
				Adj R-squared	=	0.0003
				Root MSE	=	5.655

residuals1	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
residuals2	<b>2.559679</b>	<b>2.003413</b>	<b>1.28</b>	<b>0.202</b>	<b>-1.369359</b>	<b>6.488716</b>
_cons	<b>-6.64e-09</b>	<b>.1275051</b>	<b>-0.00</b>	<b>1.000</b>	<b>-.2500594</b>	<b>.2500594</b>

```

63 . outreg2 using "PS2_regressionci.doc", append ctitle(3)
PS2 regressionci.doc
dir : seeout

64 .
65 . ***c-iii)
66 .
67 . egen mean_mrkgrm = mean(mrkgrm)

68 . egen mean_small_size = mean(small_size)

69 . egen mean_pct_dis = mean(pct_dis)

70 .
71 . display mean_mrkgrm - mean_small_size*2.559768 - mean_pct_dis*-.3267693
77.099243

72 .
73 . ***c-iv)
74 .
75 . reg ln_mrkgrm small_size pct_dis

```

Source	SS	df	MS	Number of obs	=	<b>1,967</b>
Model	<b>7.5099808</b>	<b>2</b>	<b>3.7549904</b>	F(2, 1964)	=	<b>570.24</b>
Residual	<b>12.9327428</b>	<b>1,964</b>	<b>.0065849</b>	Prob > F	=	<b>0.0000</b>
Total	<b>20.4427236</b>	<b>1,966</b>	<b>.01039813</b>	R-squared	=	<b>0.3674</b>
				Adj R-squared	=	<b>0.3667</b>
				Root MSE	=	<b>.08115</b>

ln_mrkgrm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
small_size	<b>.0365346</b>	<b>.0287485</b>	<b>1.27</b>	<b>0.204</b>	<b>-.0198462</b>	<b>.0929154</b>
pct_dis	<b>-.0047317</b>	<b>.0001402</b>	<b>-33.75</b>	<b>0.000</b>	<b>-.0050067</b>	<b>-.0044568</b>
_cons	<b>4.345013</b>	<b>.0026323</b>	<b>1650.62</b>	<b>0.000</b>	<b>4.339851</b>	<b>4.350176</b>

```

76 . outreg2 using "PS2_regressionciv.doc", replace ctitle(c-iv)
PS2 regressionciv.doc
dir : seeout

77 .
78 .
79 . **d)

```

```

80 .
81 . gen many_dis = 0
82 . replace many_dis = 1 if pct_dis > 10
(858 real changes made)
83 . gen many_disXclassize = many_dis*classize
84 . reg mrkgrm classize many_dis many_disXclassize

```

Source	SS	df	MS	Number of obs	=	1,967
Model	<b>29649.3319</b>	<b>3</b>	<b>9883.11065</b>	F(3, 1963)	=	<b>281.14</b>
Residual	<b>69006.4108</b>	<b>1,963</b>	<b>35.153546</b>	Prob > F	=	0.0000
Total	<b>98655.7428</b>	<b>1,966</b>	<b>50.1809475</b>	R-squared	=	0.3005
				Adj R-squared	=	0.2995
				Root MSE	=	5.929

mrkgrm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
classize	<b>-.1101571</b>	<b>.0291463</b>	<b>-3.78</b>	<b>0.000</b>	<b>-.1673179</b> <b>-.0529962</b>
many_dis	<b>-15.71298</b>	<b>1.346291</b>	<b>-11.67</b>	<b>0.000</b>	<b>-18.35329</b> <b>-13.07267</b>
many_disXclassize	<b>.2686753</b>	<b>.043792</b>	<b>6.14</b>	<b>0.000</b>	<b>.1827916</b> <b>.354559</b>
_cons	<b>79.52074</b>	<b>.9369263</b>	<b>84.87</b>	<b>0.000</b>	<b>77.68326</b> <b>81.35821</b>

```

85 . outreg2 using "PS2_regressionond.doc", replace ctitle(d)
PS2 regressionond.doc
dir : seeout

86 .
87 . ***d-i)
88 .
89 . test _b[many_dis]=0
( 1) many_dis = 0
      F( 1, 1963) = 136.22
      Prob > F = 0.0000

90 . test _b[many_disXclassize]=0, accumulate
( 1) many_dis = 0
( 2) many_disXclassize = 0
      F( 2, 1963) = 401.85
      Prob > F = 0.0000

91 .
92 .
93 . ***Ru^2=0.3005

```

94 . reg mrkgrm classize

Source	SS	df	MS	Number of obs	=	1,967
Model	<b>1396.59756</b>	<b>1</b>	<b>1396.59756</b>	F(1, 1965)	=	<b>28.22</b>
Residual	<b>97259.1452</b>	<b>1,965</b>	<b>49.4957482</b>	Prob > F	=	0.0000
Total	<b>98655.7428</b>	<b>1,966</b>	<b>50.1809475</b>	R-squared	=	0.0142
				Adj R-squared	=	0.0137
				Root MSE	=	<b>7.0353</b>

  

mrkgrm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
classize	<b>.1341112</b>	<b>.0252472</b>	<b>5.31</b>	<b>0.000</b>	<b>.0845971</b> <b>.1836254</b>
_cons	<b>68.6283</b>	<b>.7839904</b>	<b>87.54</b>	<b>0.000</b>	<b>67.09076</b> <b>70.16584</b>

95 . \*\*\*\*Rr^2=0.0142  
 96 . \*\*\*\*q=2, N-K=df=1, 963  
 97 . display ((0.3005-0.0142)/2)/((1-0.3005)/1963)  
**401.72044**

98 .  
 99 .  
 100 . \*\*\*d-ii)  
 101 .  
 102 . \*\*e)  
 103 .  
 104 . reg mrkgrm classize if many\_dis == 1

Source	SS	df	MS	Number of obs	=	858
Model	<b>826.915211</b>	<b>1</b>	<b>826.915211</b>	F(1, 856)	=	<b>18.08</b>
Residual	<b>39159.72</b>	<b>856</b>	<b>45.7473364</b>	Prob > F	=	0.0000
Total	<b>39986.6352</b>	<b>857</b>	<b>46.6588509</b>	R-squared	=	0.0207

mrkgrm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
classize	<b>.1585182</b>	<b>.0372848</b>	<b>4.25</b>	<b>0.000</b>	<b>.0853379</b> <b>.2316986</b>
_cons	<b>63.80775</b>	<b>1.102878</b>	<b>57.86</b>	<b>0.000</b>	<b>61.64309</b> <b>65.97241</b>

105 . outreg2 using "PS2\_regressione.doc", replace ctitle(high dis)  
PS2 regressione.doc  
dir : seeout

106 . reg mrkgrm classize if many\_dis == 0

Source	SS	df	MS	Number of obs	=	1,109
Model	<b>502.144157</b>	<b>1</b>	<b>502.144157</b>	F(1, 1107)	=	<b>18.62</b>
Residual	<b>29846.6908</b>	<b>1,107</b>	<b>26.9617803</b>	Prob > F	=	0.0000
Total	<b>30348.835</b>	<b>1,108</b>	<b>27.3906453</b>	R-squared	=	0.0165

mrkgrm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
classize	<b>-.1101571</b>	<b>.0255254</b>	<b>-4.32</b>	<b>0.000</b>	<b>-.1602407</b> <b>-.0600735</b>
_cons	<b>79.52074</b>	<b>.8205313</b>	<b>96.91</b>	<b>0.000</b>	<b>77.91076</b> <b>81.13071</b>

107 . outreg2 using "PS2\_regressione.doc", append ctitle(low dis)  
PS2 regressione.doc  
dir : seeout

108 . reg mrkgrm classize many\_dis many\_disXclassize

Source	SS	df	MS	Number of obs	=	1,967
Model	<b>29649.3319</b>	<b>3</b>	<b>9883.11065</b>	F(3, 1963)	=	<b>281.14</b>
Residual	<b>69006.4108</b>	<b>1,963</b>	<b>35.153546</b>	Prob > F	=	0.0000
Total	<b>98655.7428</b>	<b>1,966</b>	<b>50.1809475</b>	R-squared	=	0.3005
				Adj R-squared	=	<b>0.2995</b>
				Root MSE	=	<b>5.929</b>

  

mrkgrm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
classize	<b>-.1101571</b>	<b>.0291463</b>	<b>-3.78</b>	<b>0.000</b>	<b>-.1673179</b> <b>-.0529962</b>
many_dis	<b>-15.71298</b>	<b>1.346291</b>	<b>-11.67</b>	<b>0.000</b>	<b>-18.35329</b> <b>-13.07267</b>
many_disXclassize	<b>.2686753</b>	<b>.043792</b>	<b>6.14</b>	<b>0.000</b>	<b>.1827916</b> <b>.354559</b>
_cons	<b>79.52074</b>	<b>.9369263</b>	<b>84.87</b>	<b>0.000</b>	<b>77.68326</b> <b>81.35821</b>

109 . outreg2 using "PS2\_regressione.doc", append ctitle(d)  
PS2 regressione.doc  
dir : seeout

110 .  
111 . \*\*f)  
112 .  
113 . foreach regioncode in Reg1 Reg2 Reg3 Reg4 Reg5 Reg6{  
2.       gen `regioncode' = 0  
3.       replace `regioncode' = 1 if regioncode == "`regioncode'"  
4. }  
(255 real changes made)  
(195 real changes made)  
(267 real changes made)  
(276 real changes made)  
(574 real changes made)  
(400 real changes made)

114 .  
115 . \*\*g)  
116 .  
117 . reg mrkgrm classize pct\_dis if regioncode == "Reg1"

Source	SS	df	MS	Number of obs	=	255
Model	<b>2865.43406</b>	<b>2</b>	<b>1432.71703</b>	F(2, 252)	=	<b>66.06</b>
Residual	<b>5465.35025</b>	<b>252</b>	<b>21.6878978</b>	Prob > F	=	0.0000
Total	<b>8330.78431</b>	<b>254</b>	<b>32.7983634</b>	R-squared	=	0.3440
				Adj R-squared	=	0.3388
				Root MSE	=	<b>4.657</b>

  

mrkgrm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
classize	<b>-.0900784</b>	<b>.0450526</b>	<b>-2.00</b>	<b>0.047</b>	<b>-.1788059</b> <b>-.0013508</b>
pct_dis	<b>-.2490626</b>	<b>.0218086</b>	<b>-11.42</b>	<b>0.000</b>	<b>-.2920129</b> <b>-.2061122</b>
_cons	<b>81.00851</b>	<b>1.311482</b>	<b>61.77</b>	<b>0.000</b>	<b>78.42564</b> <b>83.59137</b>

```
118 . outreg2 using "PS2_regressionong.doc", replace ctitle(Reg1)
PS2 regressionong.doc
dir : seeout

119 . foreach regioncode in Reg2 Reg3 Reg4 Reg5 Reg6{
2.          reg mrkgm classize pct_dis if regioncode ==`regioncode'
3.          outreg2 using "PS2_regressionong.doc", append ctitle(`regioncode')
4. }
```

Source	SS	df	MS	Number of obs	=	<b>195</b>
				F(2, 192)	=	<b>34.84</b>
Model	<b>3017.96063</b>	<b>2</b>	<b>1508.98031</b>	Prob > F	=	<b>0.0000</b>
Residual	<b>8314.72655</b>	<b>192</b>	<b>43.3058675</b>	R-squared	=	<b>0.2663</b>
Total	<b>11332.6872</b>	<b>194</b>	<b>58.4159133</b>	Adj R-squared	=	<b>0.2587</b>
				Root MSE	=	<b>6.5807</b>

mrkgm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
classize	<b>-.054951</b>	<b>.0822927</b>	<b>-0.67</b>	<b>0.505</b>	<b>-.2172648</b> <b>.1073629</b>
pct_dis	<b>-.2521636</b>	<b>.0309288</b>	<b>-8.15</b>	<b>0.000</b>	<b>-.3131675</b> <b>-.1911597</b>
_cons	<b>77.17122</b>	<b>2.510945</b>	<b>30.73</b>	<b>0.000</b>	<b>72.21864</b> <b>82.1238</b>

PS2 regressionong.doc  
dir : seeout

Source	SS	df	MS	Number of obs	=	<b>267</b>
				F(2, 264)	=	<b>45.65</b>
Model	<b>2924.30927</b>	<b>2</b>	<b>1462.15463</b>	Prob > F	=	<b>0.0000</b>
Residual	<b>8456.43979</b>	<b>264</b>	<b>32.0319689</b>	R-squared	=	<b>0.2570</b>
Total	<b>11380.7491</b>	<b>266</b>	<b>42.7847709</b>	Adj R-squared	=	<b>0.2513</b>
				Root MSE	=	<b>5.6597</b>

mrkgm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
classize	<b>.1678957</b>	<b>.0669434</b>	<b>2.51</b>	<b>0.013</b>	<b>.0360848</b> <b>.2997067</b>
pct_dis	<b>-.2127071</b>	<b>.027496</b>	<b>-7.74</b>	<b>0.000</b>	<b>-.2668463</b> <b>-.1585678</b>
_cons	<b>69.64526</b>	<b>2.225889</b>	<b>31.29</b>	<b>0.000</b>	<b>65.2625</b> <b>74.02801</b>

PS2 regressionong.doc  
dir : seeout

Source	SS	df	MS	Number of obs	=	<b>276</b>
				F(2, 273)	=	<b>84.22</b>
Model	<b>4600.18127</b>	<b>2</b>	<b>2300.09063</b>	Prob > F	=	<b>0.0000</b>
Residual	<b>7455.58685</b>	<b>273</b>	<b>27.3098419</b>	R-squared	=	<b>0.3816</b>
Total	<b>12055.7681</b>	<b>275</b>	<b>43.8391568</b>	Adj R-squared	=	<b>0.3770</b>
				Root MSE	=	<b>5.2259</b>

mrkgm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
classize	<b>.0074092</b>	<b>.0458776</b>	<b>0.16</b>	<b>0.872</b>	<b>-.0829096</b> <b>.0977281</b>
pct_dis	<b>-.4898067</b>	<b>.0388518</b>	<b>-12.61</b>	<b>0.000</b>	<b>-.5662939</b> <b>-.4133195</b>
_cons	<b>80.17505</b>	<b>1.479157</b>	<b>54.20</b>	<b>0.000</b>	<b>77.26304</b> <b>83.08705</b>

PS2 regressionong.doc  
dir : seeout

Source	SS	df	MS	Number of obs	=	<b>574</b>
Model	<b>10101.2705</b>	<b>2</b>	<b>5050.63523</b>	F(2, 571)	=	<b>169.65</b>
Residual	<b>16999.5884</b>	<b>571</b>	<b>29.7716085</b>	Prob > F	=	<b>0.0000</b>
Total	<b>27100.8589</b>	<b>573</b>	<b>47.2964378</b>	R-squared	=	<b>0.3727</b>
				Adj R-squared	=	<b>0.3705</b>
				Root MSE	=	<b>5.4563</b>

mrkgrm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
classize	.0212184	.0429338	0.49	0.621	-.0631092 .1055459
pct_dis	-.3191605	.0195322	-16.34	0.000	-.3575243 -.2807967
_cons	75.24485	1.556768	48.33	0.000	72.18715 78.30254

PS2 regressiong.docdir : seeout

Source	SS	df	MS	Number of obs	=	<b>400</b>
Model	<b>8889.58149</b>	<b>2</b>	<b>4444.79075</b>	F(2, 397)	=	<b>168.84</b>
Residual	<b>10451.356</b>	<b>397</b>	<b>26.3258338</b>	Prob > F	=	<b>0.0000</b>
Total	<b>19340.9375</b>	<b>399</b>	<b>48.4735276</b>	R-squared	=	<b>0.4596</b>
				Adj R-squared	=	<b>0.4569</b>
				Root MSE	=	<b>5.1309</b>

mrkgrm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
classize	-.0758319	.0540577	-1.40	0.161	-.1821071 .0304432
pct_dis	-.4038452	.0231615	-17.44	0.000	-.4493797 -.3583107
_cons	79.62101	1.882575	42.29	0.000	75.91994 83.32207

PS2 regressiong.docdir : seeout

120 .  
121 . \*\*\*\*Model alternative: Dummy with omitting Reg5:  
122 . reg mrkgrm classize pct\_dis Reg1 Reg2 Reg3 Reg4 Reg6

Source	SS	df	MS	Number of obs	=	<b>1,967</b>
Model	<b>39479.1959</b>	<b>7</b>	<b>5639.88513</b>	F(7, 1959)	=	<b>186.70</b>
Residual	<b>59176.5468</b>	<b>1,959</b>	<b>30.2075277</b>	Prob > F	=	<b>0.0000</b>
Total	<b>98655.7428</b>	<b>1,966</b>	<b>50.1809475</b>	R-squared	=	<b>0.4002</b>
				Adj R-squared	=	<b>0.3980</b>
				Root MSE	=	<b>5.4961</b>

mrkgrm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
classize	.006539	.0218313	0.30	0.765	-.036276 .049354
pct_dis	-.3085222	.0102683	-30.05	0.000	-.3286603 -.2883842
Reg1	3.501301	.4311002	8.12	0.000	2.655837 4.346764
Reg2	.9691248	.4671522	2.07	0.038	.0529574 1.885292
Reg3	.3992164	.4098365	0.97	0.330	-.4045451 1.202978
Reg4	3.257748	.4188072	7.78	0.000	2.436394 4.079103
Reg6	.2489347	.3595311	0.69	0.489	-.456169 .9540384
_cons	75.55303	.8013656	94.28	0.000	73.98141 77.12465

```
123 . outreg2 using "PS2_regressiongalt.doc", replace ctitle(alt)
PS2 regressiongalt.doc
dir : seeout
```

```
124 .
125 . **h)
126 .
127 . ***h-i)
128 .
129 . reg mrkgrm classize sc_boys if n_classes == 1
```

Source	SS	df	MS	Number of obs	=	<b>240</b>
Model	<b>378.269997</b>	<b>2</b>	<b>189.134999</b>	F(2, 237)	=	<b>2.12</b>
Residual	<b>21139.3133</b>	<b>237</b>	<b>89.1954149</b>	Prob > F	=	<b>0.1222</b>
Total	<b>21517.5833</b>	<b>239</b>	<b>90.0317294</b>	R-squared	=	<b>0.0176</b>
				Adj R-squared	=	<b>0.0093</b>
				Root MSE	=	<b>9.4443</b>

mrkgrm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
classize	<b>.0964143</b>	<b>.1099979</b>	<b>0.88</b>	<b>0.382</b>	<b>-.1202843</b> <b>.3131129</b>
sc_boys	<b>-.3024193</b>	<b>.1529586</b>	<b>-1.98</b>	<b>0.049</b>	<b>-.6037514</b> <b>-.0010871</b>
_cons	<b>72.92232</b>	<b>2.177034</b>	<b>33.50</b>	<b>0.000</b>	<b>68.63352</b> <b>77.21113</b>

```
130 . outreg2 using "PS2_regressionhi.doc", replace ctitle(1)
PS2 regressionhi.doc
dir : seeout
```

```
131 .
132 . ***h-ii)
133 .
134 . reg mrkgrm sc_girls sc_boys if n_classes == 1
```

Source	SS	df	MS	Number of obs	=	<b>240</b>
Model	<b>378.269997</b>	<b>2</b>	<b>189.134999</b>	F(2, 237)	=	<b>2.12</b>
Residual	<b>21139.3133</b>	<b>237</b>	<b>89.1954149</b>	Prob > F	=	<b>0.1222</b>
Total	<b>21517.5833</b>	<b>239</b>	<b>90.0317294</b>	R-squared	=	<b>0.0176</b>
				Adj R-squared	=	<b>0.0093</b>
				Root MSE	=	<b>9.4443</b>

mrkgrm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
sc_girls	<b>.0964143</b>	<b>.1099979</b>	<b>0.88</b>	<b>0.382</b>	<b>-.1202843</b> <b>.3131129</b>
sc_boys	<b>-.206005</b>	<b>.1150097</b>	<b>-1.79</b>	<b>0.075</b>	<b>-.432577</b> <b>.020567</b>
_cons	<b>72.92232</b>	<b>2.177034</b>	<b>33.50</b>	<b>0.000</b>	<b>68.63352</b> <b>77.21113</b>

```
135 . outreg2 using "PS2_regressionhii.doc", replace ctitle(1)
PS2 regressionhii.doc
dir : seeout
```

```
136 .
137 . correlate sc_boys sc_girls
      (obs=1,967)
```

	sc_boys	sc_girls
sc_boys	<b>1.0000</b>	
sc_girls	<b>0.7918</b>	<b>1.0000</b>

```
138 . reg mrkgrm classize if n_classes == 1
```

Source	SS	df	MS	Number of obs	=	<b>240</b>
Model	<b>29.6008824</b>	<b>1</b>	<b>29.6008824</b>	F(1, 238)	=	<b>0.33</b>
Residual	<b>21487.9825</b>	<b>238</b>	<b>90.2856406</b>	Prob > F	=	<b>0.5675</b>
Total	<b>21517.5833</b>	<b>239</b>	<b>90.0317294</b>	R-squared	=	<b>0.0014</b>
				Adj R-squared	=	<b>-0.0028</b>
				Root MSE	=	<b>9.5019</b>

mrkgrm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
classize	<b>-.0475071</b>	<b>.0829689</b>	<b>-0.57</b>	<b>0.567</b>	<b>-.2109544</b>
_cons	<b>72.65987</b>	<b>2.186222</b>	<b>33.24</b>	<b>0.000</b>	<b>68.35305</b>
					<b>76.96668</b>

```
139 .
140 .
end of do-file
```