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1  *** * Do file for assignment 3 of pp 713
2
3  clear all
4  set more off, perm
5
6  * input directory
7  global dir "C:\Users\Nmath_000\Documents\MI_school\Second Year\PP 713\ps3"
8
9  * output directory
10 global outdir "C:\Users\Nmath_000\Documents\Code\courses\PP 713\ps3_tex\"
11
12 * load in data
13 use "$dir\njs_data_pp713.dta"
14
15
16
17 *****
18 * Question 1 *
19 *****
20
21 * clear stored models
22 eststo clear
23
24 * regresss earnings on treatment to get ttest
25 eststo: reg esum18i treat
26
27 * save table
28 esttab using "$outdir\ps3_table_1.tex", nonnumbers replace label se
29
30 * clear stored models
31 eststo clear
32
33
34 *****
35 * Question 2 *
36 *****
37 *clear stored models
38 eststo clear
39
40 * create varlist of variables for q2
41 local q2vars sex race age totchl8 child_miss bfeduca ed_miss bfyrearn earn_miss site_num
42 foreach y of varlist `q2vars' {
43
44   eststo: reg `y' treat
45
46 }
47
48 di `qu_q2vars'
49
50 esttab using "$outdir\ps3_table_2.tex", ///
51 mtitles( "sex" "race" "age" "totchl8" "child_miss" "bfeduca" "ed_miss" "bfyrearn"
52 "earn_miss") ///
53 nonnumbers replace label se ///
54 keep(treat)
55
56 eststo clear
57
58 reg treat `q2vars'
59 display e(F)
60
61 *****
62 * Question 3 *
63 *****
64
65 * clear stored models
66 eststo clear
67
68 * regresss earnings on treatment to get ttest
69 eststo: reg esum18i treat `q2vars'

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70
71 * save table
72 esttab using "$outdir\ps3_table_3.tex", mtitles("earnings 18 months after") replace label se
73
74 * lear stored models
75 eststo clear
76
77
78 *****
79 * Question 5 *
80 *****
81
82
83 * clear stored models
84 eststo clear
85
86 * regress earnings on treatment to get ttest
87 eststo: probit treat `q2vars'
88
89 * save table
90 esttab using "$outdir\ps3_table_5.tex", mtitles("earnings 18 months after") replace label se
91
92 * lear stored models
93 eststo clear
94
95 *****
96 * Question 6 *
97 *****
98
99 * get predicted values
100 predict pr_score
101
102
103
104
105 kdensity pr_score if treat == 1, lc(red) lw(thick) plot(kdensity pr_score if treat == 0, lc
(blue) lp(dash) lw(thick)) legend(order(2 "Treated" 1 "Un-treated"))
106
107
108 graph export "$outdir\6_kdens.png" , replace
109
110 * check for common support
111 summ pr score if treat == 1
112 summ pr_score if treat == 0
113
114
115
116
117 *****
118 * question 7 *
119 *****
120
121 * clear stored models
122 eststo clear
123
124 * do it with propensity score matching and nearest neighbor sample
125 eststo: teffects psmatch (esum18i) (treat sex race age totch18 child_miss bfeduca ed_miss
bfyrearn site_num earn_miss, probit), atet
126
127 teffects psmatch (esum18i) (treat sex race age totch18 child_miss bfeduca ed_miss bfyrearn
site_num, probit), atet
128
129 * do it with actual nearest neighbor matching
130 capture noisily teffects nnmatch (esum18i sex race age totch18 child_miss bfeduca ed_miss
bfyrearn earn_miss site_num) ///
131 (treat), biasadj(bfyrearn age bfeduca) ematch(totch18 sex race child_miss ed_miss
earn_miss site_num) atet osample(nomatch_1)
132
133 capture noisily teffects nnmatch (esum18i sex race age totch18 child_miss bfeduca ed_miss
bfyrearn earn_miss site_num) ///

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134      (treat) if nomatch_1 == 0, biasadj(bfyrearn age bfeduca totch18) ematch(sex race
child_miss ed_miss earn_miss site_num) atet osample(nomatch_2)
135
136      capture noisily teffects nnmatch (esum18i sex race age totch18 child_miss bfeduca ed_miss
bfyrearn earn_miss site_num) ///
137      (treat) if nomatch_2 == 0 & nomatch_1 == 0, biasadj(bfyrearn age bfeduca totch18) ematch(
sex race child_miss ed_miss earn_miss site_num) atet osample(nomatch_3)
138
139      eststo: teffects nnmatch (esum18i sex race age totch18 child_miss bfeduca ed_miss bfyrearn
earn_miss site_num) ///
140      (treat) if nomatch_2 == 0 & nomatch_1 == 0 & nomatch_3 == 0, biasadj(bfyrearn age bfeduca
totch18) ematch(sex race child miss ed miss earn miss site num) atet
141
142
143
144      esttab using "$outdir\ps3_q7_table.tex", ///
145      nonnumbers replace label se mtitles("Propensity score matching" "Nearest Neighbor match")
146
147
148      * clear stored models
149      eststo clear
150
151
152
153
154
155      *****
156      * question 8 *
157      *****
158
159      ssc install sensatt
160      sensatt esum18i treat sex race age totch18 child_miss bfeduca ed_miss bfyrearn site_num
earn_miss, p(sex) reps(100) boot
161
162
163
164
165
166
167
168
169
170
171
```