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1
2   // Name:  Imisi Raphael AIYETAN
3   // Course: Econometrics 512
4   //Topic: Effect of expectant  mothers smoking while pregnant on the
    birthweight of their kid
5
6   clear
7
8   set more off
9
10  // To start with, let's set the path for the data from download
    folder.
11
12  use  "/Users/imisiaiyetan/Downloads/bwght2.dta"
13
14
15  // In the next lines of codes, we construct the treatment variable
    based on the condition
16  //that if the mother ever smoked then we have cigs>0
17
18  gen Treatment_smoke = 0
19
20  replace Treatment_smoke = 1 if cigs>0
21
22
23  // The next lines of codes define the difference in log birthweight
    for mothers who smoked
24  //versus those who didn't smoke. Basically, the difference in
    average of the mothers
25  //who smoked from those who didn't smoked.
26
27
28  sum lbwght if Treatment_smoke ==1
29
30  scalar mean_Treatment_smoke = r(mean)
31
32  sum lbwght if Treatment_smoke ==0
33
34  scalar mean_noTreatment_smoke = r(mean)
35
36  display mean_noTreatment_smoke - mean_Treatment_smoke
37
38
39
40  // The next line of code indicates the estimation of the regression
    equation by running the
41  //log birthweight on the treatment variable(i.e. smoked) and the
    control variables
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42
43
44  reg lbwght Treatment_smoke mage meduc monpre npvis fage feduc fblck
    magesq npvissq mblck
45
46
47
48  // Having defined the regression estimate code, The next line of
    code defines the
49  //propensity score matching routine to estimate the average
    treatment effect.
50
51
52
53  teffects psmatch (lbwght) (Treatment_smoke mage meduc monpre npvis
    fage feduc fblck magesq npvissq mblck)
54
55
56  // In the next line of code, we define the code that estimate the
    treatment on the
57  //treated with the propensity score matching routine
58
59
60  teffects psmatch (lbwght) (Treatment_smoke mage meduc monpre npvis
    fage feduc fblck magesq npvissq mblck), atet
61
62  // In the next lines of codes, we define how the propensity score
    varies by mothers
63  //who smoked and those who didn't through the estimation of the
    logit model and thereafter
64  // we calculate the propensity score for each individual based on
    the predicted value from this
65  // regression and we graph the distributions of the propensity
    score conditional on smoked=1 and no smoked ==0
66
67  logit Treatment_smoke mage meduc monpre npvis fage feduc fblck
    magesq npvissq mblck
68
69  predict Treatment_smoke_pred
70
71  twoway (kdensity Treatment_smoke_pred if Treatment_smoke ==1) (
    kdensity Treatment_smoke_pred if Treatment_smoke ==0), legend (label
    (1 "Smoked") label(2 "No_Smoked"))
72
```