```
 1 . do "C:\Users\Administrator\Downloads\new downloads\RA for Tim\RDHonestStata\v1\Test_rdhonestV1.do"

 2 . clear all

 3 .
 4 . adopath + "."
    [1]  (BASE)      "E:\Stata 17\ado\base/"
    [2]  (SITE)      "E:\Stata 17\ado\site/"
    [3]  (PERSONAL)  "C:\Users\Administrator\ado\personal/"
    [4]  (PLUS)      "c:\ado\plus/"
    [5]  (OLDPLACE)  "c:\ado/"
    [6]              "."

 5 .
 6 . cap log close

 7 . log using "rdhonest.txt",replace
-------------------------------------------------------------------------------------------------------------------------------
      name:  <unnamed>
       log:  C:\Users\Administrator\Downloads\new downloads\RA for Tim\RDHonestStata\v1\rdhonest.txt
  log type:  smcl
 opened on:   7 Aug 2022, 13:03:35

 8 .
 9 . *******************************************************************************
10 . //  1. Lee08
11 . qui: use "./data/lee08.dta",clear

12 .
13 .
14 . // 1.1 uni kernel
15 .
16 . rdhonestV1 voteshare margin, m(0.1) kernel("uni") h(10)


   Dependent variable:   voteshare
   Running variable:   margin
------------------------------------------------------------------------------
    Estimate     Maximum Bias   Std. Error     [95% Conf.     intervals]
------------------------------------------------------------------------------
   6.0567735     1.7237683      1.190527       2.3747303      9.7388168
------------------------------------------------------------------------------
   95% One-sided Conf. intervals:
   (2.3747627, Inf),   (-Inf, 9.7387844)
   Bandwidth: 10
   Optimisation criterion:  MSE
   Std Error method:  nn
   Number of effective observations: 1209
   Maximum leverage for estimated parameter: .00370338
   Smoothness const. M: .1



17 . rdhonestV1 voteshare margin, m(0.1) kernel("uni")
   Generating initial variance estimates via RDPrelimVar
   Bandwidth (h) missing or invalid. Running RDOptBW_fit


   Dependent variable:   voteshare
   Running variable:   margin
------------------------------------------------------------------------------
    Estimate     Maximum Bias   Std. Error     [95% Conf.     intervals]
------------------------------------------------------------------------------
   5.9739815     .85025952      1.4329988      2.7360189      9.2119441
------------------------------------------------------------------------------
   95% One-sided Conf. intervals:
   (2.7666487, Inf),   (-Inf, 9.1813143)
   Bandwidth: 6.9147587
   Optimisation criterion:  MSE
   Std Error method:  nn
   Number of effective observations: 843
```

Maximum leverage for estimated parameter: **.00550335**
Smoothness const. M: **.1**

```
18 . rdhonestV1 voteshare margin, kernel("uni")
```

Generating initial variance estimates via RDPrelimVar
Smoothing class constant M missing or invalid. Running MROT_fit
Bandwidth (h) missing or invalid. Running RDOptBW_fit

Dependent variable: **voteshare**
Running variable: **margin**

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
4.7981699	**.89121052**	**1.5714064**	**1.2829887**	**8.3133511**

95% One-sided Conf. intervals:
(**1.3222258**, Inf), (-Inf, **8.274114**)
Bandwidth: **6.0119957**
Optimisation criterion: **MSE**
Std Error method: **nn**
Number of effective observations: **728**
Maximum leverage for estimated parameter: **.00642132**
Smoothness const. M: **.14281081**

```
19 .
20 . // 1.2 tri kernel
21 .
22 . rdhonestV1 voteshare margin, m(0.1) kernel("tri") h(10)
```

Dependent variable: **voteshare**
Running variable: **margin**

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
5.936726	**1.0560642**	**1.2330102**	**2.8478939**	**9.025558**

95% One-sided Conf. intervals:
(**2.8525404**, Inf), (-Inf, **9.0209115**)
Bandwidth: **10**
Optimisation criterion: **MSE**
Std Error method: **nn**
Number of effective observations: **1003.3747**
Maximum leverage for estimated parameter: **.00724322**
Smoothness const. M: **.1**

```
23 .
24 . // 1.2.1 tri kernel + optimal h
25 .
26 . rdhonestV1 voteshare margin, m(0.1) kernel("tri")
```

Generating initial variance estimates via RDPrelimVar
Bandwidth (h) missing or invalid. Running RDOptBW_fit
Iteration 0: f(p) = **3.2843434**
Iteration 1: f(p) = **3.2545513**
Iteration 2: f(p) = **3.2537915**
Iteration 3: f(p) = **3.2537877**
Iteration 4: f(p) = **3.2537877**

Dependent variable: **voteshare**
Running variable: **margin**

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
5.9366538	**.83226659**	**1.2944181**	**2.9548312**	**8.9184764**

95% One-sided Conf. intervals:
(**2.9752589**, Inf), (-Inf, **8.8980486**)
Bandwidth: **8.8485517**
Optimisation criterion: **MSE**
Std Error method: **nn**
Number of effective observations: **889.05125**
Maximum leverage for estimated parameter: **.00823634**
Smoothness const. M: **.1**

```
27 . rdhonestV1 voteshare margin, m(0.1) kernel("tri")   opt_criterion("OCI")
```
Generating initial variance estimates via RDPrelimVar
Bandwidth (h) missing or invalid. Running RDOptBW_fit
Iteration 0: f(p) = **5.5819159**
Iteration 1: f(p) = **5.5410167**
Iteration 2: f(p) = **5.541015**
Iteration 3: f(p) = **5.541015**

Dependent variable: **voteshare**
Running variable: **margin**

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
5.8226504	**.57582661**	**1.3820246**	**2.8946797**	**8.7506211**

95% One-sided Conf. intervals:
(**2.9735957**, Inf), (-Inf, **8.6717052**)
Bandwidth: **7.4293472**
Optimisation criterion: **OCI**
Optimisation criterion: **OCI** with beta **.8**
Std Error method: **nn**
Number of effective observations: **737.59284**
Maximum leverage for estimated parameter: **.00997347**
Smoothness const. M: **.1**

```
28 . rdhonestV1 voteshare margin, m(0.1) kernel("tri")   opt_criterion("FLCI")
```
Generating initial variance estimates via RDPrelimVar
Bandwidth (h) missing or invalid. Running RDOptBW_fit
Iteration 0: f(p) = **3.542463**
Iteration 1: f(p) = **3.5144537**
Iteration 2: f(p) = **3.5143254**
Iteration 3: f(p) = **3.5143252**

Dependent variable: **voteshare**
Running variable: **margin**

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
5.9544571	**.88348213**	**1.2787498**	**2.9527267**	**8.9561874**

95% One-sided Conf. intervals:
(**2.9676186**, Inf), (-Inf, **8.9412955**)
Bandwidth: **9.1115931**
Optimisation criterion: **FLCI**
Std Error method: **nn**
Number of effective observations: **917.82374**
Maximum leverage for estimated parameter: **.00798822**
Smoothness const. M: **.1**

```
29 .
30 . // 1.2.1 tri kernel + optimal h + without M
31 . rdhonestV1 voteshare margin, kernel("tri")
   Generating initial variance estimates via RDPrelimVar
   Smoothing class constant M missing or invalid. Running MROT_fit
   Bandwidth (h) missing or invalid. Running RDOptBW_fit
   Iteration 0:   f(p) =  3.8340891
   Iteration 1:   f(p) =   3.781853
   Iteration 2:   f(p) =  3.7816331
   Iteration 3:   f(p) =  3.7816329


    Dependent variable:   voteshare
    Running variable:   margin
------------------------------------------------------------------------------
     Estimate     Maximum Bias   Std. Error     [95% Conf.     intervals]
------------------------------------------------------------------------------
    5.8497322     .88800705      1.3658833      2.6944354      9.0050291
------------------------------------------------------------------------------
    95% One-sided Conf. intervals:
    (2.7150471, Inf),   (-Inf, 8.9844174)
    Bandwidth: 7.7150698
    Optimisation criterion:  MSE
    Std Error method:  nn
    Number of effective observations: 764.55959
    Maximum leverage for estimated parameter: .00956087
    Smoothness const. M: .14281081


32 . rdhonestV1 voteshare margin, kernel("tri")   opt_criterion("OCI")
   Generating initial variance estimates via RDPrelimVar
   Smoothing class constant M missing or invalid. Running MROT_fit
   Bandwidth (h) missing or invalid. Running RDOptBW_fit
   Iteration 0:   f(p) =  6.2045798
   Iteration 1:   f(p) =  5.9827626
   Iteration 2:   f(p) =  5.9640148
   Iteration 3:   f(p) =  5.9640002
   Iteration 4:   f(p) =  5.9640002


    Dependent variable:   voteshare
    Running variable:   margin
------------------------------------------------------------------------------
     Estimate     Maximum Bias   Std. Error     [95% Conf.     intervals]
------------------------------------------------------------------------------
    5.8758198     .60750187      1.436027       2.82691        8.9247296
------------------------------------------------------------------------------
    95% One-sided Conf. intervals:
    (2.9062636, Inf),   (-Inf, 8.8453759)
    Bandwidth: 6.4054418
    Optimisation criterion:  OCI
    Optimisation criterion:  OCI with beta .8
    Std Error method:  nn
    Number of effective observations: 638.66075
    Maximum leverage for estimated parameter: .01168465
    Smoothness const. M: .14281081
```

```
33 . rdhonestV1 voteshare margin, kernel("tri")   opt_criterion("FLCI")
   Generating initial variance estimates via RDPrelimVar
   Smoothing class constant M missing or invalid. Running MROT_fit
   Bandwidth (h) missing or invalid. Running RDOptBW_fit
   Iteration 0:   f(p) =  3.7981188
   Iteration 1:   f(p) =  3.7899465
   Iteration 2:   f(p) =  3.7899347
   Iteration 3:   f(p) =  3.7899347


    Dependent variable:   voteshare
    Running variable:   margin
-------------------------------------------------------------------------------
     Estimate     Maximum Bias   Std. Error     [95% Conf.     intervals]
-------------------------------------------------------------------------------
    5.8697773     .93985951      1.353205       2.6887017      9.050853
-------------------------------------------------------------------------------
    95% One-sided Conf. intervals:
    (2.7040937, Inf),   (-Inf, 9.0354609)
    Bandwidth: 7.9273811
    Optimisation criterion:  FLCI
    Std Error method:  nn
    Number of effective observations: 786.41742
    Maximum leverage for estimated parameter: .00926657
    Smoothness const. M: .14281081



34 .
35 . ********************************************************************************
36 . // 2. rcp
37 . qui: use "./data/rcp.dta",clear

38 .
39 . // 2.1 uni kernel
40 .
41 . rdhonestV1  cn (retired=elig_year), m(4 0.4) kernel("uni") h(3)


    Dependent variable:   cn
    Running variable:   elig_year
    Treatment variable:   retired
-------------------------------------------------------------------------------
     Estimate     Maximum Bias   Std. Error     [95% Conf.     intervals]
-------------------------------------------------------------------------------
    -6081.3279    24908.345      3330.3115      -36467.548     24304.892
-------------------------------------------------------------------------------
    95% One-sided Conf. intervals:
    (-36467.548, Inf),   (-Inf, 24304.892)
    Bandwidth: 3
    Optimisation criterion:  MSE
    Std Error method:  nn
    Number of effective observations: 2859
    Maximum leverage for estimated parameter: .00114857
    First-stage estimate: .33065224
    Smoothness const. M [first-stage,reduced-form]: [.4,4]



42 . rdhonestV1  cn (retired=elig_year), m(4 0.4) kernel("uni") t0(0)
   Generating initial variance estimates via RDPrelimVar
   Bandwidth (h) missing or invalid. Running RDOptBW_fit
```

Dependent variable: **cn**
Running variable: **elig_year**
Treatment variable: **retired**

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-3041.9849	**119639.28**	**721.14217**	**-123867.44**	**117783.47**

95% One-sided Conf. intervals:
(**-123867.44**, Inf), (-Inf, **117783.47**)
Bandwidth: **15**
Optimisation criterion: **MSE**
Std Error method: **nn**
Number of effective observations: **16531**
Maximum leverage for estimated parameter: **.00027266**
First-stage estimate: **.50198462**
Smoothness const. M [first-stage,reduced-form]: [**.4**,**4**]

```
43 . rdhonestV1  cn (retired=elig_year), kernel("uni") t0(0)
```
Generating initial variance estimates via RDPrelimVar
Smoothing class constant M missing or invalid. Running MROT_fit
Bandwidth (h) missing or invalid. Running RDOptBW_fit

Dependent variable: **cn**
Running variable: **elig_year**
Treatment variable: **retired**

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-4101.283	**2305.5557**	**2288.7447**	**-10174.282**	**1971.7156**

95% One-sided Conf. intervals:
(**-10171.489**, Inf), (-Inf, **1968.9226**)
Bandwidth: **5**
Optimisation criterion: **MSE**
Std Error method: **nn**
Number of effective observations: **5018**
Maximum leverage for estimated parameter: **.00076356**
First-stage estimate: **.32380997**
Smoothness const. M [first-stage,reduced-form]: [**.00817893**,**67.232053**]

```
44 .
45 . // 2.2 tri kernel
46 .
47 . rdhonestV1  cn (retired=elig_year), m(4 0.4) kernel("tri") h(3)
```

Dependent variable: **cn**
Running variable: **elig_year**
Treatment variable: **retired**

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-4623.8705	**12711.567**	**5692.377**	**-26698.565**	**17450.824**

95% One-sided Conf. intervals:
(**-26698.565**, Inf), (-Inf, **17450.824**)
Bandwidth: **3**
Optimisation criterion: **MSE**
Std Error method: **nn**
Number of effective observations: **1867**
Maximum leverage for estimated parameter: **.0012858**
First-stage estimate: **.29163173**
Smoothness const. M [first-stage,reduced-form]: [**.4**,**4**]

```
48 .
49 . // 2.2.1 tri kernel + optimal h
50 .
51 . rdhonestV1  cn (retired=elig_year), m(4 0.4) kernel("tri") t0(0)
   Generating initial variance estimates via RDPrelimVar
   Bandwidth (h) missing or invalid. Running RDOptBW_fit
   numerical derivatives are approximate
   flat or discontinuous region encountered
   Iteration 0:   f(p) =  2481787.2
   Iteration 1:   f(p) =  484315.37
   Iteration 2:   f(p) =  484315.37  (backed up)
   BFGS stepping has contracted, resetting BFGS Hessian
   Iteration 3:   f(p) =  484315.37  (backed up)
   Iteration 4:   f(p) =  405857.09
   Iteration 5:   f(p) =  178973.06
   Iteration 6:   f(p) =  171687.88
   Iteration 7:   f(p) =  158529.63
   Iteration 8:   f(p) =  157387.12
   Iteration 9:   f(p) =  157373.97
   Iteration 10:  f(p) =  157372.99
   Iteration 11:  f(p) =  157372.99


    Dependent variable:   cn
    Running variable:   elig_year
    Treatment variable:   retired
   ------------------------------------------------------------------------------
     Estimate     Maximum Bias   Std. Error     [95% Conf.     intervals]
   ------------------------------------------------------------------------------
    -3265.4049    135894.95      738.63415      -140375.3      133844.49
   ------------------------------------------------------------------------------
    95% One-sided Conf. intervals:
    (-140375.3, Inf),   (-Inf, 133844.49)
    Bandwidth: 20.099852
    Optimisation criterion:  MSE
    Std Error method:  nn
    Number of effective observations: 17348.132
    Maximum leverage for estimated parameter: .00039064
    First-stage estimate: .47233987
    Smootheness const. M [first-stage,reduced-form]: [.4,4]



52 . rdhonestV1  cn (retired=elig_year), m(4 0.4) kernel("tri")   opt_criterion("OCI") t0(0)
   Generating initial variance estimates via RDPrelimVar
   Bandwidth (h) missing or invalid. Running RDOptBW_fit
   numerical derivatives are approximate
   flat or discontinuous region encountered
   Iteration 0:   f(p) =  3933.0647
   Iteration 1:   f(p) =  1785.8751
   Iteration 2:   f(p) =  1785.8751  (backed up)
   Iteration 3:   f(p) =   1264.438
   Iteration 4:   f(p) =  1236.4006
   Iteration 5:   f(p) =   1235.812
   Iteration 6:   f(p) =   1235.796
   Iteration 7:   f(p) =   1235.796


    Dependent variable:   cn
    Running variable:   elig_year
    Treatment variable:   retired
   ------------------------------------------------------------------------------
     Estimate     Maximum Bias   Std. Error     [95% Conf.     intervals]
   ------------------------------------------------------------------------------
    -2669.2911    90023.744      822.04803      -94045.183     88706.601
   ------------------------------------------------------------------------------
    95% One-sided Conf. intervals:
    (-94045.183, Inf),   (-Inf, 88706.601)
    Bandwidth: 17.472782
    Optimisation criterion:  OCI
    Optimisation criterion:  OCI with beta .8
    Std Error method:  nn
```

Number of effective observations: **15268.006**
Maximum leverage for estimated parameter: **.00045141**
First-stage estimate: **.45988985**
Smoothness const. M [first-stage,reduced-form]: [**.4**,**4**]

```
53 . rdhonestV1  cn (retired=elig_year), m(4 0.4) kernel("tri")   opt_criterion("FLCI")  t0(0)
```

Generating initial variance estimates via RDPrelimVar
Bandwidth (h) missing or invalid. Running RDOptBW_fit
numerical derivatives are approximate
flat or discontinuous region encountered
Iteration 0: f(p) = **3087.6663**
Iteration 1: f(p) = **1363.993**
Iteration 2: f(p) = **1363.993** (backed up)
Iteration 3: f(p) = **1363.993** (backed up)
BFGS stepping has contracted, resetting BFGS Hessian
Iteration 4: f(p) = **771.34257**
Iteration 5: f(p) = **771.16043**
Iteration 6: f(p) = **770.89274**
Iteration 7: f(p) = **770.89237**
Iteration 8: f(p) = **770.89237**

Dependent variable: **cn**
Running variable: **elig_year**
Treatment variable: **retired**

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-3477.1703	**154173.95**	**717.99812**	**-158832.12**	**151877.78**

95% One-sided Conf. intervals:
(**-158832.12**, Inf), (-Inf, **151877.78**)
Bandwidth: **20.85147**
Optimisation criterion: **FLCI**
Std Error method: **nn**
Number of effective observations: **18110.89**
Maximum leverage for estimated parameter: **.00037477**
First-stage estimate: **.47480523**
Smoothness const. M [first-stage,reduced-form]: [**.4**,**4**]

```
54 .
55 . // 2.2.1 tri kernel + optimal h + without M
56 . rdhonestV1  cn (retired=elig_year), kernel("tri") t0(0)
```

Generating initial variance estimates via RDPrelimVar
Smoothing class constant M missing or invalid. Running MROT_fit
Bandwidth (h) missing or invalid. Running RDOptBW_fit
numerical derivatives are approximate
flat or discontinuous region encountered
Iteration 0: f(p) = **2499803.8**
Iteration 1: f(p) = **712295.26**
Iteration 2: f(p) = **712295.26** (backed up)
Iteration 3: f(p) = **711756.27**
Iteration 4: f(p) = **711714.43**
Iteration 5: f(p) = **711707.44**
Iteration 6: f(p) = **711707.39**
Iteration 7: f(p) = **711707.39**

Dependent variable: **cn**
Running variable: **elig_year**
Treatment variable: **retired**

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-4006.2961	**2166.6095**	**2298.5239**	**-9958.2429**	**1945.6508**

95% One-sided Conf. intervals:
(**-9953.6409**, Inf), (-Inf, **1941.0487**)
Bandwidth: **6.5283031**
Optimisation criterion: **MSE**
Std Error method: **nn**
Number of effective observations: **4968.8418**
Maximum leverage for estimated parameter: **.00107722**
First-stage estimate: **.31992201**
Smoothness const. M [first-stage,reduced-form]: [**.00817893,67.232053**]

```
57 . rdhonestV1  cn (retired=elig_year), kernel("tri")   opt_criterion("OCI") t0(0)
```

Generating initial variance estimates via RDPrelimVar
Smoothing class constant M missing or invalid. Running MROT_fit
Bandwidth (h) missing or invalid. Running RDOptBW_fit
numerical derivatives are approximate
flat or discontinuous region encountered
Iteration 0: f(p) = **4185.9929**
Iteration 1: f(p) = **2685.5988**
Iteration 2: f(p) = **2685.5988** (backed up)
Iteration 3: f(p) = **2685.5988** (backed up)
Iteration 4: f(p) = **2675.2619**
Iteration 5: f(p) = **2673.3144**
Iteration 6: f(p) = **2673.1791**
Iteration 7: f(p) = **2673.0963**
Iteration 8: f(p) = **2673.0947**
Iteration 9: f(p) = **2673.0947**

Dependent variable: **cn**
Running variable: **elig_year**
Treatment variable: **retired**

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-4472.6906	**2047.1737**	**2412.0572**	**-10496.954**	**1551.5728**

95% One-sided Conf. intervals:
(**-10487.345**, Inf), (-Inf, **1541.9642**)
Bandwidth: **6.1232205**
Optimisation criterion: **OCI**
Optimisation criterion: **OCI** with beta **.8**
Std Error method: **nn**
Number of effective observations: **4537.3344**
Maximum leverage for estimated parameter: **.00111527**
First-stage estimate: **.31856446**
Smoothness const. M [first-stage,reduced-form]: [**.00817893,67.232053**]

```
58 . rdhonestV1  cn (retired=elig_year), kernel("tri")   opt_criterion("FLCI") t0(0)
```

Generating initial variance estimates via RDPrelimVar
Smoothing class constant M missing or invalid. Running MROT_fit
Bandwidth (h) missing or invalid. Running RDOptBW_fit
numerical derivatives are approximate
flat or discontinuous region encountered
Iteration 0: f(p) = **3098.8419**
Iteration 1: f(p) = **1630.3177**
Iteration 2: f(p) = **1630.3177** (backed up)
Iteration 3: f(p) = **1630.3177** (backed up)
BFGS stepping has contracted, resetting BFGS Hessian
Iteration 4: f(p) = **1630.3177** (backed up)
Iteration 5: f(p) = **1630.0733**

```
Iteration 6:   f(p) =   1629.256
Iteration 7:   f(p) =  1628.7169
Iteration 8:   f(p) =  1628.7169  (backed up)
Iteration 9:   f(p) =  1628.6158
Iteration 10:  f(p) =  1628.6133
Iteration 11:  f(p) =  1628.6133


 Dependent variable:   cn
 Running variable:   elig_year
 Treatment variable:   retired
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-3624.6465	2295.5305	2196.1351	-9534.4876	2285.1947

```
 95% One-sided Conf. intervals:
 (-9532.4977, Inf),   (-Inf, 2283.2047)
 Bandwidth: 7.0784237
 Optimisation criterion:  FLCI
 Std Error method:  nn
 Number of effective observations: 5146.901
 Maximum leverage for estimated parameter: .00102774
 First-stage estimate: .32162247
 Smoothness const. M [first-stage,reduced-form]: [.00817893,67.232053]



59 .
60 . log close
      name:  <unnamed>
       log:  C:\Users\Administrator\Downloads\new downloads\RA for Tim\RDHonestStata\v1\rdhonest.txt
  log type:  smcl
 closed on:   7 Aug 2022, 13:08:24
-------------------------------------------------------------------------------

61 .
62 .
63 .
64 .
65 .
66 .
67 .
68 .
69 .
70 .
71 .
72 .
73 .
74 .
75 .
76 .
end of do-file

77 .
```