```
      name:  <unnamed>
       log:  /Users/admin/Dropbox/RDHonest_TimArmstrong/RDHonest-vStata/current/rdhc
> cl
  log type:  smcl
 opened on:  16 Aug 2022, 10:33:58

. 
. *******************************************************************************
. //  1. Lee08
. qui: use `"${datadir}/lee08.dta"', clear

. 
. // 1.1 uni kernel
. rdhonest voteshare margin, m(0.1) kernel("uni") h(10)

Honest inference: SHARP Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
6.05677353	**1.72376825**	**1.19052699**	**2.37473029**	**9.73881678**

```
95% One-sided Conf. intervals: (2.37476265 , Inf), (-Inf,  9.73878442)
Bandwidth: 10
Number of effective observations: 1209

Parameters:
Cutoff: 0
Kernel: uniform
Optimization criterion: MSE
Standard error estimation method: NN
Maximum leverage for estimated parameter: .003703381
Smoothness constant M: .1

  Dependent variable: voteshare
    Running variable: margin

. 
. // 1.1.1 uni kernel + optimal h
. rdhonest voteshare margin, m(0.1) kernel("uni")

Honest inference: SHARP Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
5.97398151	**.850259518**	**1.43299882**	**2.73601889**	**9.21194414**

```
95% One-sided Conf. intervals: (2.76664868 , Inf), (-Inf,  9.18131434)
Bandwidth (optimized): 6.91475868
Number of effective observations: 843

Parameters:
```

```
Cutoff: 0
Kernel: uniform
Optimization criterion: MSE
Standard error estimation method: NN
Maximum leverage for estimated parameter: .005503345
Smoothness constant M: .1
```

```
 Dependent variable: voteshare
   Running variable: margin
```

```
11 . rdhonest voteshare margin, m(0.1) kernel("uni") opt_criterion("OCI")

Honest inference: SHARP Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
4.88998924	**.572475838**	**1.55210007**	**1.65199641**	**8.12798208**

```
95% One-sided Conf. intervals: (1.76453597 , Inf), (-Inf,  8.01544252)
Bandwidth (optimized): 5.77180088
Number of effective observations: 701

Parameters:
Cutoff: 0
Kernel: uniform
Optimization criterion: OCI, with beta .8
Standard error estimation method: NN
Maximum leverage for estimated parameter: .007011609
Smoothness constant M: .1
```

```
 Dependent variable: voteshare
   Running variable: margin
```

```
12 . rdhonest voteshare margin, m(0.1) kernel("uni") opt_criterion("FLCI")

Honest inference: SHARP Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
5.57055475	**.890553506**	**1.4221318**	**2.31590621**	**8.82520329**

```
95% One-sided Conf. intervals: (2.34080259 , Inf), (-Inf,  8.80030691)
Bandwidth (optimized): 7.10620284
Number of effective observations: 863

Parameters:
Cutoff: 0
Kernel: uniform
Optimization criterion: FLCI
Standard error estimation method: NN
Maximum leverage for estimated parameter: .005349821
Smoothness constant M: .1
```

```
  Dependent variable: voteshare
    Running variable: margin

13 .
14 . // 1.1.2 uni kernel + optimal h + without M + est_w saved as wgt
15 . rdhonest voteshare margin, kernel("uni") savew(wgt)
Using Armstrong and Kolesar (2020) rule of thumb for smoothness constant M

Honest inference: SHARP Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
4.79816988	**.891210516**	**1.57140644**	**1.2829887**	**8.31335106**

```
95% One-sided Conf. intervals: (1.32222577 , Inf), (-Inf,  8.27411398)
Bandwidth (optimized): 6.01199567
Number of effective observations: 728

Parameters:
Cutoff: 0
Kernel: uniform
Optimization criterion: MSE
Standard error estimation method: NN
Maximum leverage for estimated parameter: .006421319
Smoothness constant M (rule of thumb): .142810807

  Dependent variable: voteshare
    Running variable: margin

Generated variables:
     Estimation weight: wgt

16 .
17 . // 1.2 tri kernel
18 . rdhonest voteshare margin, m(0.1) kernel("tri") h(10)

Honest inference: SHARP Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
5.93672596	**1.05606425**	**1.23301022**	**2.84789393**	**9.02555799**

```
95% One-sided Conf. intervals: (2.85254037 , Inf), (-Inf,  9.02091154)
Bandwidth: 10
Number of effective observations: 1003.37472

Parameters:
Cutoff: 0
Kernel: triangular
Optimization criterion: MSE
Standard error estimation method: NN
```

```
Maximum leverage for estimated parameter: .007243217
Smoothness constant M: .1
```

```
 Dependent variable: voteshare
   Running variable: margin
```

```
19 .
20 . // 1.2.1 tri kernel + optimal h
21 . rdhonest voteshare margin, m(0.1) kernel("tri")
```

```
Honest inference: SHARP Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
5.93665377	**.832266594**	**1.29441808**	**2.95483117**	**8.91847638**

```
95% One-sided Conf. intervals: (2.9752589  , Inf), (-Inf,  8.89804865)
Bandwidth (optimized): 8.84855171
Number of effective observations: 889.051245

Parameters:
Cutoff: 0
Kernel: triangular
Optimization criterion: MSE
Standard error estimation method: NN
Maximum leverage for estimated parameter: .008236342
Smoothness constant M: .1
```

```
 Dependent variable: voteshare
   Running variable: margin
```

```
22 . rdhonest voteshare margin, m(0.1) kernel("tri") opt_criterion("OCI")
```

```
Honest inference: SHARP Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
5.82265043	**.575826613**	**1.38202457**	**2.89467975**	**8.75062111**

```
95% One-sided Conf. intervals: (2.9735957  , Inf), (-Inf,  8.67170516)
Bandwidth (optimized): 7.42934716
Number of effective observations: 737.592837

Parameters:
Cutoff: 0
Kernel: triangular
Optimization criterion: OCI, with beta .8
Standard error estimation method: NN
Maximum leverage for estimated parameter: .009973466
Smoothness constant M: .1
```

```
 Dependent variable: voteshare
```

```
      Running variable: margin

23 . rdhonest voteshare margin, m(0.1) kernel("tri") opt_criterion("FLCI")

Honest inference: SHARP Regression Discontinuity
------------------------------------------------------------------------------
 Estimate      Maximum Bias      Std. Error      [ 95% Conf.      intervals ]
------------------------------------------------------------------------------
 5.95445705    .883482126        1.27874983      2.95272674        8.95618736
------------------------------------------------------------------------------
 95% One-sided Conf. intervals: (2.96761863 , Inf), (-Inf,  8.94129547)
 Bandwidth (optimized): 9.11159306
 Number of effective observations: 917.823736

 Parameters:
 Cutoff: 0
 Kernel: triangular
 Optimization criterion: FLCI
 Standard error estimation method: NN
 Maximum leverage for estimated parameter: .007988219
 Smoothness constant M: .1
------------------------------------------------------------------------------
  Dependent variable: voteshare
    Running variable: margin

24 .
25 . cap drop wgt /*for the dofile to run*/

26 . // 1.2.2 tri kernel + optimal h + without M + est_w saved as wgt
27 . rdhonest voteshare margin, kernel("tri") savew(wgt)
Using Armstrong and Kolesar (2020) rule of thumb for smoothness constant M

Honest inference: SHARP Regression Discontinuity
------------------------------------------------------------------------------
 Estimate      Maximum Bias      Std. Error      [ 95% Conf.      intervals ]
------------------------------------------------------------------------------
 5.84973224    .88800705         1.36588331      2.69443541        9.00502906
------------------------------------------------------------------------------
 95% One-sided Conf. intervals: (2.71504707 , Inf), (-Inf,  8.98441741)
 Bandwidth (optimized): 7.71506984
 Number of effective observations: 764.559585

 Parameters:
 Cutoff: 0
 Kernel: triangular
 Optimization criterion: MSE
 Standard error estimation method: NN
 Maximum leverage for estimated parameter: .009560868
 Smoothness constant M (rule of thumb): .142810807
------------------------------------------------------------------------------
  Dependent variable: voteshare
    Running variable: margin
```

Generated variables:
Estimation weight: **wgt**

```
. 
. // 1.3 display option tests and by option tests
. // 1.3.1 by option (psuedo categories)
. qui{

. bys bygrp: rdhonest voteshare margin, m(0.1) kernel("uni") h(10)
```

-> bygrp = 0

Honest inference: **SHARP** Regression Discontinuity

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
5.27567752	**1.71837784**	**1.63811092**	**.861406093**	**9.68994895**

95% One-sided Conf. intervals: (**.862846988** , Inf), (-Inf, **9.68850806**)
Bandwidth: **10**
Number of effective observations: **604**

Parameters:
Cutoff: **0**
Kernel: **uniform**
Optimization criterion: **MSE**
Standard error estimation method: **NN**
Maximum leverage for estimated parameter: **.007626798**
Smoothness constant M: **.1**

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

-> bygrp = 1

Honest inference: **SHARP** Regression Discontinuity

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
6.80020499	**1.72728041**	**1.77634908**	**2.14825205**	**11.4521579**

95% One-sided Conf. intervals: (**2.15109035** , Inf), (-Inf, **11.4493196**)
Bandwidth: **10**
Number of effective observations: **605**

Parameters:
Cutoff: **0**
Kernel: **uniform**
Optimization criterion: **MSE**

```
Standard error estimation method: NN
Maximum leverage for estimated parameter: .00719001
Smoothness constant M: .1
```

```
 Dependent variable: voteshare
   Running variable: margin
```

```
33 . bys bygrp: rdhonest voteshare margin, m(0.1) kernel("uni") h(10) savew(wgt)
```

```
-> bygrp = 0

Honest inference: SHARP Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
5.27567752	**1.71837784**	**1.63811092**	**.861406093**	**9.68994895**

```
95% One-sided Conf. intervals: (.862846988 , Inf), (-Inf,  9.68850806)
Bandwidth: 10
Number of effective observations: 604

Parameters:
Cutoff: 0
Kernel: uniform
Optimization criterion: MSE
Standard error estimation method: NN
Maximum leverage for estimated parameter: .007626798
Smoothness constant M: .1
```

```
 Dependent variable: voteshare
   Running variable: margin

Generated variables:
    Estimation weight: wgt
```

```
-> bygrp = 1

Honest inference: SHARP Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
6.80020499	**1.72728041**	**1.77634908**	**2.14825205**	**11.4521579**

```
95% One-sided Conf. intervals: (2.15109035 , Inf), (-Inf,  11.4493196)
Bandwidth: 10
Number of effective observations: 605

Parameters:
Cutoff: 0
Kernel: uniform
```

```
Optimization criterion: MSE
Standard error estimation method: NN
Maximum leverage for estimated parameter: .00719001
Smoothness constant M: .1
```

```
 Dependent variable: voteshare
   Running variable: margin

Generated variables:
    Estimation weight: wgt
```

```
34 .
35 . // 1.3.2 hide parameters
36 . rdhonest voteshare margin, m(0.1) kernel("uni") h(10) noparam
```

```
Honest inference: SHARP Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
6.05677353	**1.72376825**	**1.19052699**	**2.37473029**	**9.73881678**

```
95% One-sided Conf. intervals: (2.37476265 , Inf), (-Inf,  9.73878442)
Bandwidth: 10
Number of effective observations: 1209
```

```
 Dependent variable: voteshare
   Running variable: margin
```

```
37 .
38 . // 1.3.3 show iteration log
39 . rdhonest voteshare margin, m(0.1) kernel("tri") iterl
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

Honest inference: SHARP Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
5.93665377	**.832266594**	**1.29441808**	**2.95483117**	**8.91847638**

```
95% One-sided Conf. intervals: (2.9752589  , Inf), (-Inf,  8.89804865)
Bandwidth (optimized): 8.84855171
Number of effective observations: 889.051245

Parameters:
Cutoff: 0
Kernel: triangular
Optimization criterion: MSE
Standard error estimation method: NN
```

```
Maximum leverage for estimated parameter: .008236342
Smoothness constant M: .1
```

```
 Dependent variable: voteshare
   Running variable: margin
```

```
. 
. ********************************************************************************
. // 2. rcp
. qui: use `"${datadir}/rcp.dta"', clear

. 
. // 2.1 uni kernel
. rdhonest cn (retired=elig_year), m(4 0.4) kernel("uni") h(3)
```

Honest inference: **FUZZY** Regression Discontinuity

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-6081.32789	**24908.345**	**3330.31152**	**-36467.5479**	**24304.8921**

```
95% One-sided Conf. intervals: (-36467.5479, Inf), (-Inf,  24304.8921)
First-stage estimate: .330652239
Bandwidth: 3
Number of effective observations: 2859

Parameters:
Cutoff: 0
Kernel: uniform
Optimization criterion: MSE
Standard error estimation method: NN
Maximum leverage for estimated parameter: .001148573
Smoothness constant M (first-stage): .4
Smoothness constant M (reduced-form): 4
```

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

```
. 
. // 2.1.1 uni kernel + optimal h
. rdhonest cn (retired=elig_year), m(4 0.4) kernel("uni") t0(0)
```

Honest inference: **FUZZY** Regression Discontinuity

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-3041.98487	**119639.281**	**721.142172**	**-123867.44**	**117783.47**

```
95% One-sided Conf. intervals: (-123867.44 , Inf), (-Inf,   117783.47)
First-stage estimate: .501984619
Bandwidth (optimized): 15
```

Number of effective observations: **16991**

Parameters:
Cutoff: **0**
Kernel: **uniform**
Optimization criterion: **MSE**
Standard error estimation method: **NN**
Maximum leverage for estimated parameter: **.000272655**
Smoothness constant M (first-stage): **.4**
Smoothness constant M (reduced-form): **4**

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

```
50 . rdhonest cn (retired=elig_year), m(4 0.4) kernel("uni") t0(0) opt_criterion("OCI")
```

Honest inference: **FUZZY** Regression Discontinuity

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-2372.75338	**82919.9153**	**792.503945**	**-86596.2216**	**81850.7149**

95% One-sided Conf. intervals: (**-86596.2216**, Inf), (-Inf, **81850.7149**)
First-stage estimate: **.479008759**
Bandwidth (optimized): **14**
Number of effective observations: **14923**

Parameters:
Cutoff: **0**
Kernel: **uniform**
Optimization criterion: **OCI**, with beta **.8**
Standard error estimation method: **NN**
Maximum leverage for estimated parameter: **.000308509**
Smoothness constant M (first-stage): **.4**
Smoothness constant M (reduced-form): **4**

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

```
51 . rdhonest cn (retired=elig_year), m(4 0.4) kernel("uni") t0(0) opt_criterion("FLCI"
```

Honest inference: **FUZZY** Regression Discontinuity

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-3273.64811	**141925.173**	**702.843267**	**-146354.895**	**139807.599**

95% One-sided Conf. intervals: (**-146354.895**, Inf), (-Inf, **139807.599**)
First-stage estimate: **.500478044**
Bandwidth (optimized): **16**

Number of effective observations: **2521**

Parameters:
Cutoff: **0**
Kernel: **uniform**
Optimization criterion: **FLCI**
Standard error estimation method: **NN**
Maximum leverage for estimated parameter: **.000260008**
Smoothness constant M (first-stage): **.4**
Smoothness constant M (reduced-form): **4**

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

```
52 .
53 . // 2.1.2 uni kernel + optimal h + without M + est_w saved as wgt
54 . rdhonest cn (retired=elig_year), kernel("uni") t0(0) savew(wgt)
```

Using Armstrong and Kolesar (2020) rule of thumb for smoothness constant M

Honest inference: **FUZZY** Regression Discontinuity

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-4101.28302	**2305.5557**	**2288.74466**	**-10174.2817**	**1971.71564**

95% One-sided Conf. intervals: (**-10171.4887**, Inf), (-Inf, **1968.92264**)
First-stage estimate: **.323809965**
Bandwidth (optimized): **5**
Number of effective observations: **5018**

Parameters:
Cutoff: **0**
Kernel: **uniform**
Optimization criterion: **MSE**
Standard error estimation method: **NN**
Maximum leverage for estimated parameter: **.000763565**
Smoothness constant M (first-stage, rule of thumb): **.008178929**
Smoothness constant M (reduced-form, rule of thumb): **67.2320533**

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

Generated variables:
Estimation weight: **wgt**

```
55 .
56 . // 2.2 tri kernel
57 . rdhonest cn (retired=elig_year), m(4 0.4) kernel("tri") h(3)
```

Honest inference: **FUZZY** Regression Discontinuity

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-4623.87045	**12711.5674**	**5692.37704**	**-26698.5649**	**17450.824**

95% One-sided Conf. intervals: (**-26698.5649**, Inf), (-Inf, **17450.824**)
First-stage estimate: **.291631727**
Bandwidth: **3**
Number of effective observations: **1867**

Parameters:
Cutoff: **0**
Kernel: **triangular**
Optimization criterion: **MSE**
Standard error estimation method: **NN**
Maximum leverage for estimated parameter: **.001285804**
Smoothness constant M (first-stage): **.4**
Smoothness constant M (reduced-form): **4**

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

```
58 .
59 . // 2.2.1 tri kernel + optimal h
60 . rdhonest cn (retired=elig_year), m(4 0.4) kernel("tri") t0(0)
numerical derivatives are approximate
flat or discontinuous region encountered
```

Honest inference: **FUZZY** Regression Discontinuity

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-3265.39123	**135893.817**	**738.635525**	**-140374.156**	**133843.373**

95% One-sided Conf. intervals: (**-140374.156**, Inf), (-Inf, **133843.373**)
First-stage estimate: **.472339712**
Bandwidth (optimized): **20.0998112**
Number of effective observations: **17348.0823**

Parameters:
Cutoff: **0**
Kernel: **triangular**
Optimization criterion: **MSE**
Standard error estimation method: **NN**
Maximum leverage for estimated parameter: **.000390641**
Smoothness constant M (first-stage): **.4**
Smoothness constant M (reduced-form): **4**

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

```
61 . rdhonest cn (retired=elig_year), m(4 0.4) kernel("tri") opt_criterion("OCI") t0(0)
numerical derivatives are approximate
flat or discontinuous region encountered

Honest inference: FUZZY Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-2669.30504	**90024.7481**	**822.045201**	**-94046.1972**	**88707.5871**

```
95% One-sided Conf. intervals: (-94046.1972, Inf), (-Inf,  88707.5871)
First-stage estimate: .459890334
Bandwidth (optimized): 17.4728504
Number of effective observations: 15268.0757

Parameters:
Cutoff: 0
Kernel: triangular
Optimization criterion: OCI, with beta .8
Standard error estimation method: NN
Maximum leverage for estimated parameter: .00045141
Smoothness constant M (first-stage): .4
Smoothness constant M (reduced-form): 4
```

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

62 . rdhonest cn (retired=elig_year), m(4 0.4) kernel("tri") opt_criterion("FLCI") t0(0
numerical derivatives are approximate
flat or discontinuous region encountered

Honest inference: FUZZY Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-3477.16989	**154173.914**	**717.998156**	**-158832.085**	**151877.746**

```
95% One-sided Conf. intervals: (-158832.085, Inf), (-Inf,  151877.746)
First-stage estimate: .474805227
Bandwidth (optimized): 20.8514679
Number of effective observations: 18110.8883

Parameters:
Cutoff: 0
Kernel: triangular
Optimization criterion: FLCI
Standard error estimation method: NN
Maximum leverage for estimated parameter: .000374766
Smoothness constant M (first-stage): .4
Smoothness constant M (reduced-form): 4
```

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

63 .
64 . cap drop wgt /*for the dofile to run*/

65 . // 2.2.1 tri kernel + optimal h + without M + est_w saved as wgt
66 . rdhonest cn (retired=elig_year), kernel("tri") t0(0) savew(wgt)
Using Armstrong and Kolesar (2020) rule of thumb for smoothness constant M
numerical derivatives are approximate
flat or discontinuous region encountered

Honest inference: FUZZY Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-4006.29622	**2166.60942**	**2298.5239**	**-9958.24309**	**1945.65065**

```
95% One-sided Conf. intervals: (-9953.64101, Inf), (-Inf,  1941.04857)
First-stage estimate: .319922011
Bandwidth (optimized): 6.52830295
Number of effective observations: 4968.84169

Parameters:
Cutoff: 0
Kernel: triangular
Optimization criterion: MSE
Standard error estimation method: NN
Maximum leverage for estimated parameter: .001077215
Smoothness constant M (first-stage, rule of thumb): .008178929
Smoothness constant M (reduced-form, rule of thumb): 67.2320533
```

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

Generated variables:
    Estimation weight: wgt

67 .
68 . // 2.3 display option tests and by option tests
69 . // 2.3.1 by option (psuedo categories)
70 . qui{

71 . bys bygrp: rdhonest cn (retired=elig_year), m(4 0.4) kernel("uni") h(3)

-> bygrp = 0

Honest inference: FUZZY Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-4491.91001	**16079.1055**	**4215.82584**	**-27505.4319**	**18521.6119**

95% One-sided Conf. intervals: (**-27505.4319**, Inf), (-Inf, **18521.6119**)
First-stage estimate: **.377016964**
Bandwidth: **3**
Number of effective observations: **1486**

Parameters:
Cutoff: **0**
Kernel: **uniform**
Optimization criterion: **MSE**
Standard error estimation method: **NN**
Maximum leverage for estimated parameter: **.001944326**
Smoothness constant M (first-stage): **.4**
Smoothness constant M (reduced-form): **4**

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

-> bygrp = 1

Honest inference: **FUZZY** Regression Discontinuity

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-8403.37021	**42323.5418**	**5684.21055**	**-60076.6063**	**43269.8659**

95% One-sided Conf. intervals: (**-60076.6063**, Inf), (-Inf, **43269.8659**)
First-stage estimate: **.270350791**
Bandwidth: **3**
Number of effective observations: **1373**

Parameters:
Cutoff: **0**
Kernel: **uniform**
Optimization criterion: **MSE**
Standard error estimation method: **NN**
Maximum leverage for estimated parameter: **.002761653**
Smoothness constant M (first-stage): **.4**
Smoothness constant M (reduced-form): **4**

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

```
72 . bys bygrp: rdhonest cn (retired=elig_year), m(4 0.4) kernel("uni") h(3) savew(wgt)
```

```
-> bygrp = 0

Honest inference: FUZZY Regression Discontinuity
------------------------------------------------------------------------------
 Estimate      Maximum Bias      Std. Error      [ 95% Conf.      intervals ]
------------------------------------------------------------------------------
 -4491.91001   16079.1055        4215.82584      -27505.4319       18521.6119
------------------------------------------------------------------------------
 95% One-sided Conf. intervals: (-27505.4319, Inf), (-Inf,  18521.6119)
 First-stage estimate: .377016964
 Bandwidth: 3
 Number of effective observations: 1486

 Parameters:
 Cutoff: 0
 Kernel: uniform
 Optimization criterion: MSE
 Standard error estimation method: NN
 Maximum leverage for estimated parameter: .001944326
 Smoothness constant M (first-stage): .4
 Smoothness constant M (reduced-form): 4
------------------------------------------------------------------------------
  Dependent variable: cn
    Running variable: elig_year
  Treatment variable: retired

 Generated variables:
     Estimation weight: wgt

------------------------------------------------------------------------------
-> bygrp = 1

Honest inference: FUZZY Regression Discontinuity
------------------------------------------------------------------------------
 Estimate      Maximum Bias      Std. Error      [ 95% Conf.      intervals ]
------------------------------------------------------------------------------
 -8403.37021   42323.5418        5684.21055      -60076.6063       43269.8659
------------------------------------------------------------------------------
 95% One-sided Conf. intervals: (-60076.6063, Inf), (-Inf,  43269.8659)
 First-stage estimate: .270350791
 Bandwidth: 3
 Number of effective observations: 1373

 Parameters:
 Cutoff: 0
 Kernel: uniform
 Optimization criterion: MSE
 Standard error estimation method: NN
 Maximum leverage for estimated parameter: .002761653
 Smoothness constant M (first-stage): .4
 Smoothness constant M (reduced-form): 4
```

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

 Generated variables:
     Estimation weight: wgt
```

```
73 .
74 . // 2.3.2 hide parameters
75 . rdhonest cn (retired=elig_year), m(4 0.4) kernel("uni") h(3) noparam
```

```
Honest inference: FUZZY Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-6081.32789	**24908.345**	**3330.31152**	**-36467.5479**	**24304.8921**

```
 95% One-sided Conf. intervals: (-36467.5479, Inf), (-Inf,  24304.8921)
 First-stage estimate: .330652239
 Bandwidth: 3
 Number of effective observations: 2859
```

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

```
76 .
77 . // 2.3.3 show iteration log
78 . rdhonest cn (retired=elig_year), m(4 0.4) kernel("tri") t0(0) iterl
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) =  178973.08
Iteration 6:   f(p) =  171687.87
Iteration 7:   f(p) =   158529.6
Iteration 8:   f(p) =  157387.12
Iteration 9:   f(p) =  157373.97
Iteration 10:  f(p) =  157372.99
Iteration 11:  f(p) =  157372.99

Honest inference: FUZZY Regression Discontinuity
```

Estimate	Maximum Bias	Std. Error	[95% Conf.	intervals]
-3265.40486	**135894.953**	**738.634152**	**-140375.303**	**133844.494**

```
First-stage estimate: .472339873
Bandwidth (optimized): 20.0998523
Number of effective observations: 17348.1317

Parameters:
Cutoff: 0
Kernel: triangular
Optimization criterion: MSE
Standard error estimation method: NN
Maximum leverage for estimated parameter: .00039064
Smoothness constant M (first-stage): .4
Smoothness constant M (reduced-form): 4
-------------------------------------------------------------------------------

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

79 .
80 . log close
       name:  <unnamed>
        log:  /Users/admin/Dropbox/RDHonest_TimArmstrong/RDHonest-vStata/current/rdhc
> cl
  log type:  smcl
 closed on:  16 Aug 2022, 10:38:04
-------------------------------------------------------------------------------
```