Replication 1

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Part 1

```
. use https://github.com/scunning1975/causal-inference-class/raw/master/hansen
> _dwi, clear
```

Part 2

Part 3

```
. gen bac_dummy = (bac1 >= 0.08)
```

Part 4

The very small added value is added to make the histogram more smooth.

```
. quietly hist bac1, width(0.001000001)

. rddensity bac1, c(0.08) kernel(uniform)
Computing data-driven bandwidth selectors.

Point estimates and standard errors have been adjusted for repeated observatio
> ns.
(Use option nomasspoints to suppress this adjustment.)

RD Manipulation test using local polynomial density estimation.
```

c = 0.080	Left of c	Right of c		Number of obs =	2145
> 58					
				Model =	unrestrict
> ed					
Number of obs	23010	191548		BW method =	co
> mb					
Eff. Number of obs	14727	28946		Kernel =	unifo
> rm					
Order est. (p)	2	2		VCE method =	jackkni
> fe					
Order bias (q)	3	3			
BW est. (h)	0.023	0.023			

```
Running variable: bac1.
```

1

Method	T	P>|T|
Robust	-0.0939	0.9252

P-values of binomial tests. (H0: prob = .5)

Window Length / 2	<c	>=c	P>|T|
0.000	909	0	0.0000
0.000	909	0	0.0000
0.000	909	0	0.0000
0.000	909	0	0.0000
0.000	909	0	0.0000
0.000	909	0	0.0000
0.000	909	0	0.0000
0.000	909	0	0.0000
0.000	909	0	0.0000
0.000	909	0	0.0000

```
. quietly graph export ".\Figures\pic1.png", width(500) replace
```
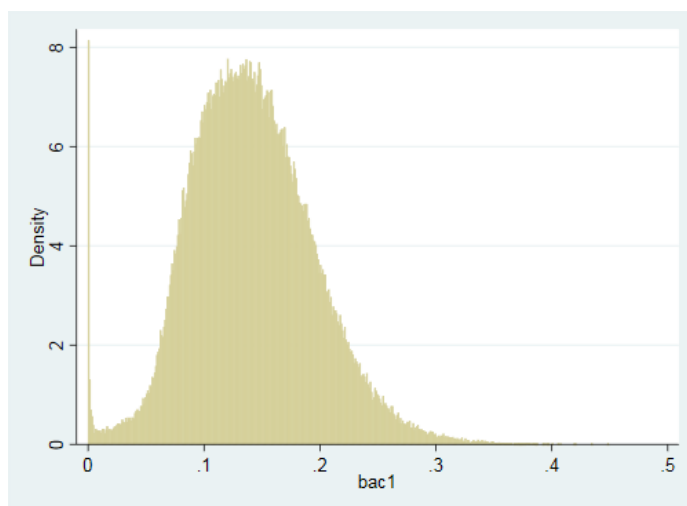

Part 5

```
. quietly rdrobust male bac1, c(0.08) h(0.05) kernel(uniform)
. ests to
(est1 stored)
. quietly rdrobust white bac1, c(0.08) h(0.05) kernel(uniform)
. ests to
(est2 stored)
. quietly rdrobust aged bac1, c(0.08) h(0.05) kernel(uniform)
. ests to
(est3 stored)
. quietly rdrobust acc bac1, c(0.08) h(0.05) kernel(uniform)
. ests to
```

```
(est4 stored)
. esttab using ".\Tables\table1.tex", se("%g") label title("Covariate Balance"
> ) mtitles("Male" "White" "Age" "Accident") replace rename(RD_Estimate DUI)
(output written to .\Tables\table1.tex)
. eststo clear
```

Table 1: Covariate Balance

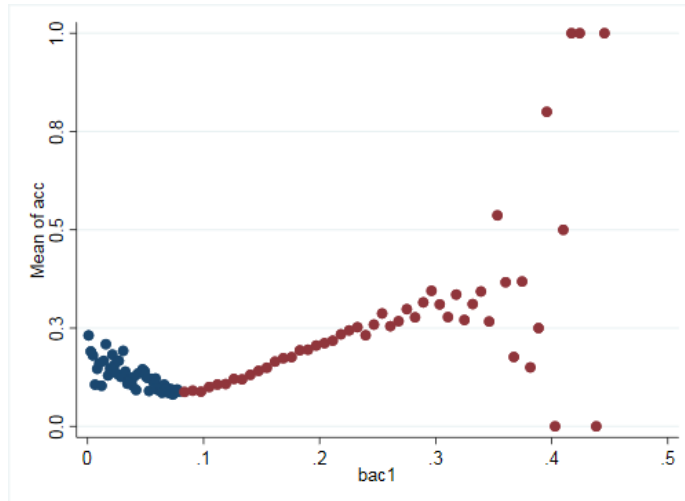|	(1)	(2)	(3)	(4)
	Male	White	Age	Accident
DUI	0.00618	0.00570	-0.140	-0.00335
	(.0057025)	(.0050077)	(.1643679)	(.0040618)
Observations	214558	214558	214558	214558

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

```
. quietly cmogram acc bac1, scatter cutpoint(0.08)
. quietly graph export ".\Figures\pic2.png", width(500) replace
```


Part 6

//cmogram acc bac1 if bac1 <= 0.2 & bac1 >= 0.04, scatter cutpoint(0.08) lfit lineat(0.08) //cmogram male bac1 if bac1 <= 0.2 & bac1 >= 0.04, scatter cutpoint(0.08) lfit lineat(0.08) //cmogram aged bac1 if bac1 <= 0.2 & bac1 >= 0.04, scatter cutpoint(0.08) lfit lineat(0.08) //cmogram white bac1 if bac1 <= 0.2 & bac1 >= 0.04, scatter cutpoint(0.08) lfit lineat(0.08)

linear cmogram

```
. quietly cmogram acc bac1 if bac1 <= 0.2 & bac1 >= 0.04, scatter cutpoint(0.0
> 8) lfitci lineat(0.08)
```

```
. quietly graph export ".\Figures\pic3.png", width(500) replace

. quietly cmogram male bac1 if bac1 <= 0.2 & bac1 >= 0.04, scatter cutpoint(0.
> 08) lfitci lineat(0.08)

. quietly graph export ".\Figures\pic4.png", width(500) replace

. quietly cmogram aged bac1 if bac1 <= 0.2 & bac1 >= 0.04, scatter cutpoint(0.
> 08) lfitci lineat(0.08)

. quietly graph export ".\Figures\pic5.png", width(500) replace

. quietly cmogram white bac1 if bac1 <= 0.2 & bac1 >= 0.04, scatter cutpoint(0
> .08) lfitci lineat(0.08)

. quietly graph export ".\Figures\pic6.png", width(500) replace
```

//quad cmogram

```
. quietly cmogram acc bac1 if bac1 <= 0.2 & bac1 >= 0.04, scatter cutpoint(0.0
> 8) qfitci lineat(0.08)

. quietly graph export ".\Figures\pic7.png", width(500) replace

. quietly cmogram male bac1 if bac1 <= 0.2 & bac1 >= 0.04, scatter cutpoint(0.
> 08) qfitci lineat(0.08)

. quietly graph export ".\Figures\pic8.png", width(500) replace

. quietly cmogram aged bac1 if bac1 <= 0.2 & bac1 >= 0.04, scatter cutpoint(0.
> 08) qfitci lineat(0.08)

. quietly graph export ".\Figures\pic9.png", width(500) replace

. quietly cmogram white bac1 if bac1 <= 0.2 & bac1 >= 0.04, scatter cutpoint(0
> .08) qfitci lineat(0.08)

. quietly graph export ".\Figures\pic10.png", width(500) replace
```

//part 7

```
. quietly gen bac_sq = bac1 * bac1

. quietly gen bac_inter = bac1* bac_dummy

. quietly gen bac_inter_sq = bac1 * bac1 * bac_dummy

. quietly rdrobust recidivism bac1 if bac1 >= 0.03 & bac1 <= 0.13, c(0.08) h(0
> .05) kernel(uniform) covs(bac1) all

. eststo
(est1 stored)

. quietly rdrobust recidivism bac1 if bac1 >= 0.03 & bac1 <= 0.13, c(0.08) h(0
> .05) kernel(uniform) covs(bac1     bac_dummy bac_inter) all

. eststo
(est2 stored)

. quietly rdrobust recidivism bac1 if bac1 >= 0.03 & bac1 <= 0.13, c(0.08) h(0
> .05) kernel(uniform) covs(bac1 bac_dummy bac_inter bac_sq bac_inter_sq) all

. eststo
(est3 stored)

. esttab using ".\Tables\table2.tex", se("%g") label title("Panel A: Recidivis
> m Local Linear Regression") mtitles("BAC control" "Linear interaction" "Line
> ar, quad. interactions") replace drop(Conventional Bias*)
(output written to .\Tables\table2.tex)

. eststo clear

. quietly rdrobust recidivism bac1 if bac1 >= 0.055 & bac1 <= 0.105, c(0.08) h
> (0.05) kernel(uniform) covs(bac1) all
```

4

```
. eststo
(est1 stored)

. quietly rdrobust recidivism bac1 if bac1 >= 0.055 & bac1 <= 0.105, c(0.08) h
> (0.05) kernel(uniform) covs(bac1      bac_dummy bac_inter) all

. eststo
(est2 stored)

. quietly rdrobust recidivism bac1 if bac1 >= 0.055 & bac1 <= 0.105, c(0.08) h
> (0.05) kernel(uniform) covs(bac1 bac_dummy bac_inter bac_sq bac_inter_sq) al
> l

. eststo
(est3 stored)

. esttab using ".\Tables\table3.tex", se("%g") label title("Panel B: Recidivis
> m Local Linear Regression") mtitles("BAC control" "Linear interaction" "Line
> ar, quad. interactions") replace drop(Conventional Bias*)
(output written to .\Tables\table3.tex)

. eststo clear
```

Table 2: Panel A: Recidivism Local Linear Regression

	(1) BAC control	(2) Linear interaction	(3) Linear, quad. interactions
Robust	-0.0143*	-0.0543***	-0.0193**
	(.0062351)	(.0062351)	(.0062351)
Observations	89967	89967	89967

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3: Panel B: Recidivism Local Linear Regression

	(1) BAC control	(2) Linear interaction	(3) Linear, quad. interactions
Robust	-0.0145	0.0121	-0.309***
	(.0084771)	(.0084771)	(.0084771)
Observations	46957	46957	46957

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

//part 8 //linear cmogram

```
. quietly cmogram recidivism bac1 if bac1 <= 0.15, scatter cutpoint(0.08) lfit
> ci lineat(0.08)

. quietly graph export ".\Figures\pic11.png", width(500) replace

. quietly cmogram recidivism bac1 if bac1 <= 0.15, scatter cutpoint(0.08) qfit
> ci lineat(0.08)

. quietly graph export ".\Figures\pic12.png", width(500) replace
```

//This is needed to get the pdf to compile correctly (don't know why)

```
. cd "C:\Users\Daniel\Documents\MA_Econ\Causal_Inference\Replications\RDD\Do\"
C:\Users\Daniel\Documents\MA_Econ\Causal_Inference\Replications\RDD\Do
```