table 1 replication

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December 9, 2020

```
#full sample
houses$taxexon = ifelse(is.na(houses$tax1), 0, 1)
houses = houses %>%
  select(lnrentals, lntax, taxexon, sewer1, sewer2, sewer4, dist_pump, dist_cent, dist_pit_fake,
         dist_square, dist_church, dist_police, dist_fire, dist_thea, dist_pub, dist_urinal, dist_vent,
         dist_school, dist_bank, dist_broad, dist_netw, broad, block)
in_broad_table1 <- houses %>%
  filter(broad == 1)

out_broad_table1 <- houses %>%
  filter(broad == 0)

apply(in_broad_table1, 2, mean, na.rm = T)
```

```
##     lnrentals         lntax       taxexon        sewer1        sewer2
##    3.71312212    0.44580740    0.06477733    0.47165992    0.40080972
##        sewer4     dist_pump     dist_cent dist_pit_fake   dist_square
##    0.12753036    1.04474464    1.31852276    2.35858648    2.58550497
##   dist_church   dist_police     dist_fire     dist_thea      dist_pub
##    1.31100143    4.37614608    3.60148485    4.01988891    0.28579932
##   dist_urinal     dist_vent   dist_school     dist_bank    dist_broad
##    0.87389329    0.42566619    1.29642241    3.95997299    1.07656388
##     dist_netw         broad         block
##    0.31738823    1.00000000  334.26923077
```

```
#within 100 meters
houses100 = houses %>%
  filter(dist_netw < 1)

houses100_in_broad_table1 <- houses100 %>%
  filter(broad == 1)

houses100_out_broad_table1 <- houses100 %>%
  filter(broad == 0)

summary(houses100_in_broad_table1)
```

```
##    lnrentals         lntax            taxexon           sewer1
##  Min.   :1.946   Min.   :-1.3375   Min.   :0.00000   Min.   :0.0000
##  1st Qu.:3.611   1st Qu.: 0.3275   1st Qu.:0.00000   1st Qu.:0.0000
##  Median :3.784   Median : 0.5008   Median :0.00000   Median :0.0000
##  Mean   :3.709   Mean   : 0.4421   Mean   :0.06531   Mean   :0.4673
##  3rd Qu.:3.932   3rd Qu.: 0.6484   3rd Qu.:0.00000   3rd Qu.:1.0000
```

```
##  Max.   :5.529   Max.   : 2.2460   Max.   :1.00000   Max.   :1.0000
##  NA's   :32
##      sewer2           sewer4         dist_pump         dist_cent
##  Min.   :0.0000   Min.   :0.0000   Min.   :0.07237   Min.   :0.1063
##  1st Qu.:0.0000   1st Qu.:0.0000   1st Qu.:0.80117   1st Qu.:0.7848
##  Median :0.0000   Median :0.0000   Median :1.06735   Median :1.2311
##  Mean   :0.4041   Mean   :0.1286   Mean   :1.05100   Mean   :1.3230
##  3rd Qu.:1.0000   3rd Qu.:0.0000   3rd Qu.:1.34081   3rd Qu.:1.8413
##  Max.   :1.0000   Max.   :1.0000   Max.   :1.84071   Max.   :2.7377
##
##  dist_pit_fake     dist_square      dist_church        dist_police
##  Min.   :0.4618   Min.   :0.6377   Min.   :0.001246   Min.   :2.347
##  1st Qu.:1.6126   1st Qu.:2.1938   1st Qu.:0.830081   1st Qu.:3.630
##  Median :2.4980   Median :2.6026   Median :1.257647   Median :4.521
##  Mean   :2.3580   Mean   :2.5834   Mean   :1.311228   Mean   :4.379
##  3rd Qu.:3.0872   3rd Qu.:3.0081   3rd Qu.:1.744568   3rd Qu.:5.123
##  Max.   :4.0047   Max.   :4.2700   Max.   :3.282639   Max.   :5.797
##
##    dist_fire       dist_thea        dist_pub          dist_urinal
##  Min.   :1.452   Min.   :1.393   Min.   :0.0000053   Min.   :0.0002668
##  1st Qu.:2.860   1st Qu.:3.576   1st Qu.:0.1436668   1st Qu.:0.4674270
##  Median :3.674   Median :4.246   Median :0.2601194   Median :0.8812349
##  Mean   :3.596   Mean   :4.027   Mean   :0.2873413   Mean   :0.8700788
##  3rd Qu.:4.424   3rd Qu.:4.633   3rd Qu.:0.3992296   3rd Qu.:1.2411569
##  Max.   :5.804   Max.   :5.561   Max.   :0.8520235   Max.   :2.0821925
##
##    dist_vent         dist_school        dist_bank       dist_broad
##  Min.   :0.002426   Min.   :0.05573   Min.   :1.728   Min.   :0.07237
##  1st Qu.:0.188896   1st Qu.:0.88996   1st Qu.:2.972   1st Qu.:0.80117
##  Median :0.345038   Median :1.29430   Median :4.137   Median :1.09817
##  Mean   :0.426904   Mean   :1.29645   Mean   :3.958   Mean   :1.08308
##  3rd Qu.:0.590124   3rd Qu.:1.63978   3rd Qu.:4.886   3rd Qu.:1.39190
##  Max.   :1.264193   Max.   :2.97573   Max.   :5.961   Max.   :1.94344
##
##    dist_netw            broad       block
##  Min.   :0.003596   Min.   :1   Min.   :226.0
##  1st Qu.:0.115851   1st Qu.:1   1st Qu.:292.0
##  Median :0.248570   Median :1   Median :334.5
##  Mean   :0.311533   Mean   :1   Mean   :334.1
##  3rd Qu.:0.470431   3rd Qu.:1   3rd Qu.:373.0
##  Max.   :0.993776   Max.   :1   Max.   :486.0
##
```

```r
#find the right SE function

testlm <- lm.cluster(data = houses, lntax~broad, cluster = "block")
summary(testlm)
```

```
## R^2= 0.00347
##
##                Estimate Std. Error  t value     Pr(>|t|)
## (Intercept)  0.51463434 0.04305511 11.95292 6.268295e-33
## broad       -0.06882694 0.05706383 -1.20614 2.277637e-01
```

```r
#in_broad_df (first column)
test = houses %>%
  select(-dist_broad, -dist_netw, -broad, -block)


#get the means
in_all_mean = apply(in_broad_table1, 2, mean, na.rm = T)
out_all_mean = apply(out_broad_table1, 2, mean, na.rm = T)

in_all_mean = in_all_mean[1:19]
out_all_mean = out_all_mean[1:19]

in_100_mean = apply(houses100_in_broad_table1, 2, mean, na.rm = T)[1:19]
out_100_mean = apply(houses100_out_broad_table1, 2, mean, na.rm = T)[1:19]

#get the standard errors

#first we do it on the full sample

se_vec_full = c()
n = length(names(houses))
for (i in 1:n) {
  m = lm.cluster(data = houses, houses[[i]]~broad, cluster = "block")
  se_vec_full = append(se_vec_full, summary(m)[2,2])
}
```

```
## R^2= 0.00335
##
##                Estimate Std. Error   t value  Pr(>|t|)
## (Intercept)  3.77477482 0.04504731 83.795782 0.0000000
## broad       -0.06165271 0.05747346 -1.072716 0.2833985
## R^2= 0.00347
##
##                Estimate Std. Error  t value     Pr(>|t|)
## (Intercept)  0.51463434 0.04305511 11.95292 6.268295e-33
## broad       -0.06882694 0.05706383 -1.20614 2.277637e-01
## R^2= 0.03785
##
##                Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  0.2312704 0.03731069  6.198501 5.700346e-10
## broad       -0.1664930 0.03959185 -4.205235 2.608110e-05
## R^2= 0.00719
##
##                Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  0.56514658 0.05204858 10.858059 1.825882e-27
## broad       -0.09348666 0.08546783 -1.093823 2.740327e-01
## R^2= 0.01505
##
##                Estimate Std. Error  t value     Pr(>|t|)
## (Intercept) 0.2752443 0.04496932 6.120713 9.315776e-10
## broad       0.1255654 0.08151355 1.540424 1.234571e-01
## R^2= 0.00165
##
##                Estimate Std. Error    t value     Pr(>|t|)
```

```
## (Intercept)  0.15960912 0.03649698  4.3732143 1.224304e-05
## broad       -0.03207876 0.05433517 -0.5903866 5.549315e-01
## R^2= 0.00808
##
##              Estimate Std. Error   t value     Pr(>|t|)
## (Intercept) 0.9575271 0.06315397 15.161788 6.332214e-52
## broad       0.0872175 0.07924690  1.100579 2.710798e-01
## R^2= 0.31251
##
##              Estimate Std. Error   t value      Pr(>|t|)
## (Intercept)  2.471882 0.08939226 27.652076 2.634905e-168
## broad       -1.153359 0.11764073 -9.804078  1.081303e-22
## R^2= 0.06337
##
##               Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  3.1371998  0.1948094 16.103947 2.393386e-58
## broad       -0.7786134  0.2241031 -3.474354 5.120854e-04
## R^2= 0.00388
##
##               Estimate Std. Error    t value      Pr(>|t|)
## (Intercept)  2.7153147  0.1165126 23.3049038 3.953706e-120
## broad       -0.1298097  0.1369479 -0.9478767  3.431922e-01
## R^2= 0.04476
##
##               Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  1.7168058  0.1015192 16.911152 3.723563e-64
## broad       -0.4058044  0.1297861 -3.126718 1.767695e-03
## R^2= 0.06507
##
##              Estimate Std. Error  t value      Pr(>|t|)
## (Intercept)  5.412055  0.2431828 22.25509 1.006821e-109
## broad       -1.035909  0.2640524 -3.92312  8.740953e-05
## R^2= 0.10694
##
##              Estimate Std. Error   t value     Pr(>|t|)
## (Intercept) 2.6651434  0.1401537 19.015857 1.260592e-80
## broad       0.9363415  0.1854405  5.049283 4.434704e-07
## R^2= 0.12054
##
##              Estimate Std. Error   t value      Pr(>|t|)
## (Intercept)  5.303345  0.2097941 25.278805 5.464078e-141
## broad       -1.283456  0.2359520 -5.439481  5.343598e-08
## R^2= 0.04352
##
##               Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  0.4068866 0.03059842 13.297635 2.389075e-40
## broad       -0.1210872 0.03726891 -3.249015 1.158053e-03
## R^2= 0.03475
##
##               Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  1.1225079 0.06812084 16.478187 5.264013e-61
## broad       -0.2486146 0.08740426 -2.844422 4.449213e-03
## R^2= 0.02926
##
```

```
##               Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  0.5556579 0.03122993 17.792481 8.082088e-71
## broad       -0.1299917 0.04731335 -2.747463 6.005831e-03
## R^2= 0.26919
##
##               Estimate Std. Error   t value      Pr(>|t|)
## (Intercept)  2.477127  0.1136899 21.788445 2.986191e-105
## broad       -1.180705  0.1319971 -8.944926  3.721990e-19
## R^2= 0.02726
##
##               Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  4.6937482  0.2889502 16.244141 2.457605e-59
## broad       -0.7337752  0.3174945 -2.311143 2.082496e-02
## R^2= 0.48701
##
##               Estimate Std. Error   t value      Pr(>|t|)
## (Intercept)  2.323923 0.07800072  29.79361 4.727175e-195
## broad       -1.247359 0.09662586 -12.90916  3.996177e-38
## R^2= 0.15527
##
##               Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  0.8305438 0.08001182 10.380263 3.049330e-25
## broad       -0.5131556 0.08511126 -6.029232 1.647404e-09
## R^2= 1
##
##                 Estimate   Std. Error       t value     Pr(>|t|)
## (Intercept) -1.2414e-14 6.377473e-16 -1.946539e+01 2.158617e-84
## broad        1.0000e+00 6.377473e-16  1.568019e+15 0.000000e+00
## R^2= 0.08449
##
##             Estimate Std. Error   t value      Pr(>|t|)
## (Intercept) 268.2858   12.14260 22.094595 3.562539e-108
## broad        65.9834   13.96586  4.724623  2.305429e-06
```

```
#now we do it on the within 100 m sample
se_vec_100 = c()
n = length(names(houses100))
for (i in 1:n) {
  m = lm.cluster(data = houses100, houses100[[i]]~broad, cluster = "block")
  se_vec_100 = append(se_vec_100, summary(m)[2,2])
}
```

```
## R^2= 0.00095
##
##                 Estimate Std. Error    t value Pr(>|t|)
## (Intercept)  3.74017015 0.05701556 65.5991113 0.000000
## broad       -0.03113626 0.06561339 -0.4745413 0.635114
## R^2= 0.00243
##
##                 Estimate Std. Error    t value     Pr(>|t|)
## (Intercept)  0.49473172 0.05392031  9.1752393 4.505727e-20
## broad       -0.05261414 0.06422497 -0.8192163 4.126630e-01
## R^2= 0.04223
##
##               Estimate Std. Error   t value     Pr(>|t|)
```

```
## (Intercept)  0.2219482 0.05067520  4.379820 1.187776e-05
## broad       -0.1566421 0.05224477 -2.998235 2.715485e-03
## R^2= 0.01498
##
##               Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  0.5930949 0.06483096  9.148328 5.782132e-20
## broad       -0.1257480 0.09080652 -1.384790 1.661165e-01
## R^2= 0.02298
##
##              Estimate Std. Error  t value     Pr(>|t|)
## (Intercept) 0.2589396 0.05445789 4.754859 1.985851e-06
## broad       0.1451421 0.08371560 1.733752 8.296218e-02
## R^2= 0.00073
##
##                Estimate Std. Error    t value    Pr(>|t|)
## (Intercept)  0.14796547 0.04653235  3.1798409 0.001473559
## broad       -0.01939405 0.06099924 -0.3179392 0.750531093
## R^2= 0.00024
##
##                Estimate Std. Error    t value     Pr(>|t|)
## (Intercept)  1.06526490 0.08163897 13.0484854 6.482334e-39
## broad       -0.01426891 0.09351396 -0.1525858 8.787249e-01
## R^2= 0.24746
##
##               Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  2.1802571  0.1069519 20.385406 2.253395e-92
## broad       -0.8572464  0.1297925 -6.604744 3.982052e-11
## R^2= 0.0122
##
##               Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  2.6299211  0.1908297 13.781507 3.293254e-43
## broad       -0.2719061  0.2156867 -1.260653 2.074339e-01
## R^2= 0.00452
##
##              Estimate Std. Error    t value     Pr(>|t|)
## (Intercept)  2.708643  0.1278741 21.1821146 1.396223e-99
## broad       -0.125261  0.1414558 -0.8855134 3.758798e-01
## R^2= 0.02942
##
##               Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  1.6087261  0.1209565 13.300041 2.313408e-40
## broad       -0.2974978  0.1415504 -2.101709 3.557874e-02
## R^2= 0.01974
##
##               Estimate Std. Error  t value      Pr(>|t|)
## (Intercept)  4.7921801  0.2112646 22.68331 6.546903e-114
## broad       -0.4129325  0.2248083 -1.83682  6.623642e-02
## R^2= 0.07633
##
##              Estimate Std. Error   t value     Pr(>|t|)
## (Intercept) 2.8539059  0.1919211 14.870208 5.145343e-50
## broad       0.7419658  0.2241813  3.309668 9.340669e-04
## R^2= 0.05513
##
```

```
##               Estimate Std. Error   t value      Pr(>|t|)
## (Intercept)  4.6802444  0.2056433 22.759037 1.167838e-114
## broad       -0.6532525  0.2246850 -2.907414  3.644302e-03
## R^2= 0.05053
##
##               Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  0.4053544 0.04036460 10.042324 9.930691e-24
## broad       -0.1180131 0.04590602 -2.570754 1.014775e-02
## R^2= 0.01534
##
##               Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  1.0199714 0.07185322 14.195208 9.809444e-46
## broad       -0.1498926 0.08768336 -1.709476 8.736275e-02
## R^2= 0.03888
##
##               Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  0.5634929 0.03715352 15.166608 5.884023e-52
## broad       -0.1365893 0.05017826 -2.722082 6.487205e-03
## R^2= 0.2014
##
##               Estimate Std. Error   t value      Pr(>|t|)
## (Intercept)  2.0249684 0.09380634 21.586690 2.395672e-103
## broad       -0.7285197 0.10980532 -6.634649  3.252758e-11
## R^2= 0.00124
##
##               Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  4.0858585  0.2948869 13.855678 1.175419e-43
## broad       -0.1275429  0.3159936 -0.403625 6.864885e-01
## R^2= 0.5479
##
##               Estimate Std. Error   t value    Pr(>|t|)
## (Intercept)  1.9803458 0.05058999  39.14501 0.00000e+00
## broad       -0.8972709 0.07450478 -12.04313 2.10799e-33
## R^2= 0.06505
##
##               Estimate Std. Error   t value     Pr(>|t|)
## (Intercept)  0.4540373 0.02821993 16.089240 3.035383e-58
## broad       -0.1425040 0.04187758 -3.402871 6.668174e-04
## R^2= 1
##
##                  Estimate   Std. Error       t value     Pr(>|t|)
## (Intercept) -5.171075e-15 2.841206e-16 -1.820028e+01 5.134395e-74
## broad        1.000000e+00 2.841206e-16  3.519632e+15 0.000000e+00
## R^2= 0.0306
##
##              Estimate Std. Error  t value      Pr(>|t|)
## (Intercept) 304.76695   11.72981 25.98225 7.860092e-149
## broad        29.28815   13.08143  2.23891  2.516180e-02
```

```
#the last 4 se's are for variables that don't need to be included in the table
se_vec_100 = se_vec_100[1:19]
se_vec_full = se_vec_full[1:19]
```

```
bw_table1 = c()
houses$dist_netw <- ifelse(houses$broad == 0, -houses$dist_netw, houses$dist_netw )
```

```
for (i in 1:19) {
  rdbwselectOBJ = rdbwselect(y = houses[[i]], x = houses$dist_netw)
  bw_table1 = append(bw_table1, rdbwselectOBJ$bws[1])
}

table1_bw <- mean(bw_table1)

houses$temp = abs(houses$dist_netw)

m <- rdrobust(y = houses$sewer4, x = houses$dist_netw, h = .297, vce = "hc0", cluster = houses$block)
summary(m)
```

```
## Call: rdrobust
##
## Number of Obs.                 1722
## BW type                      Manual
## Kernel                   Triangular
## VCE method                      HC0
##
## Number of Obs.                1228         494
## Eff. Number of Obs.            279         280
## Order est. (p)                   1           1
## Order bias  (q)                  2           2
## BW est. (h)                  0.297       0.297
## BW bias (b)                  0.297       0.297
## rho (h/b)                    1.000       1.000
## Unique Obs.                   1181         490
##
## ===============================================================================
##         Method     Coef. Std. Err.         z     P>|z|      [ 95% C.I. ]
## ===============================================================================
##   Conventional    -0.181     0.124    -1.453     0.146    [-0.424 , 0.063]
##         Robust         -         -    -0.957     0.338    [-0.485 , 0.167]
## ===============================================================================
```

```
rd_est_vec = c()
rd_se_vec = c()

for (i in 1:19) {
  m <- rdrobust(y = houses[[i]], x = houses$dist_netw, h = .297, vce = "hc0", cluster = houses$block)
  rd_est_vec = append(rd_est_vec, m$Estimate[1])
  rd_se_vec = append(rd_se_vec, m$se[1])
}
```

```
names(in_all_mean) <- c("Rental Price (in logs)", "Tax assessed (in logs)", "Tax exonerated (yes = 1)",
"Sewer Access: New sewer", "Sewer Access: No access", "Closest pump Dist.(m/100)", "Soho centroid Dist.

test = data.frame(
  Full_In = in_all_mean,
  Out = out_all_mean,
  SE = se_vec_full,
  Within_100m_In = in_100_mean,
  Out = out_100_mean,
  SE = se_vec_100,
```

```
  RD_Est = rd_est_vec[1:19],
  SE = rd_se_vec[1:19]
)
stargazer(test, summary = FALSE)
```

% Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
% Date and time: Tue, Dec 15, 2020 - 5:04:48 PM

Table 1:

	Full_In	Out	SE	Within_100m_In	Out.1	SE.1	RD_Est	SE.2
Rental Price (in logs)	3.713	3.775	0.057	3.709	3.740	0.066	0.062	0.147
Tax assessed (in logs)	0.446	0.515	0.057	0.442	0.495	0.064	0.044	0.152
Tax exonerated (yes = 1)	0.065	0.231	0.040	0.065	0.222	0.052	-0.034	0.056
Sewer Access: Old/existing	0.472	0.565	0.085	0.467	0.593	0.091	-0.067	0.189
Sewer Access: New sewer	0.401	0.275	0.082	0.404	0.259	0.084	0.248	0.151
Sewer Access: No access	0.128	0.160	0.054	0.129	0.148	0.061	-0.181	0.124
Closest pump Dist.(m/100)	1.045	0.958	0.079	1.051	1.065	0.094	0.034	0.098
Soho centroid Dist.(m/100)	1.319	2.472	0.118	1.323	2.180	0.130	-0.152	0.275
Pres. plague pit Dist.(m/100)	2.359	3.137	0.224	2.358	2.630	0.216	0.211	0.401
Public square Dist.(m/100)	2.586	2.715	0.137	2.583	2.709	0.141	-0.190	0.356
Church Dist.(m/100)	1.311	1.717	0.130	1.311	1.609	0.142	-0.184	0.275
Police station Dist.(m/100)	4.376	5.412	0.264	4.379	4.792	0.225	0.264	0.552
Fire station Dist.(m/100)	3.601	2.665	0.185	3.596	2.854	0.224	0.389	0.458
Theater Dist.(m/100)	4.020	5.303	0.236	4.027	4.680	0.225	0.043	0.512
Pub Dist.(m/100)	0.286	0.407	0.037	0.287	0.405	0.046	-0.158	0.121
Urinal Dist.(m/100)	0.874	1.123	0.087	0.870	1.020	0.088	-0.282	0.207
Sewer vent Dist.(m/100)	0.426	0.556	0.047	0.427	0.563	0.050	-0.166	0.142
Primary school Dist.(m/100)	1.296	2.477	0.132	1.296	2.025	0.110	-0.368	0.282
Bank Dist.(m/100)	3.960	4.694	0.317	3.958	4.086	0.316	0.223	0.639