



```

name: <unnamed>
log: /hdir/0/jhaber/Projects/charter_data/sorting-schools-2019/logs/results_3_
> schpoc_mi100_linear_clusts_101019.smcl
log type: smcl
opened on: 2 Nov 2019, 11:57:11

```

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1 . ** -----
2 . ** FULLY NESTED MIXED-EFFECTS LINEAR MODELS (100 IMPUTATIONS) PT 3: IBL, ACADEMICS -
> > RACE
3 . ** -----
4 .
5 . * 0. controls only
6 . *mi xeq 1 / 5: mixed pocschoolprop primary middle high lnage lnstudents urban || _al
> l:R.cmoname || _all:R.state || geodistrict: , cov(unstructured)
7 . mi est, dots post: mixed pocschoolprop primary middle high lnage lnstudents urban ||
> _all:R.cmoname || _all:R.state || geodistrict: , cov(unstructured)

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Imputations (100):

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> .....10.....20.....30.....40.....50.....60.....70.....
> ..80.....90.....100 done

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Multiple-imputation estimates      Imputations      =      100
Mixed-effects ML regression       Number of obs   =      5,784

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Group Variable	No. of Groups	Observations per Group		
		Minimum	Average	Maximum
<b>_all</b>	<b>1</b>	<b>5,784</b>	<b>5,784.0</b>	<b>5,784</b>
<b>geodistrict</b>	<b>1,481</b>	<b>1</b>	<b>3.9</b>	<b>251</b>

```

DF adjustment: Large sample      Average RVI      =      0.0000
                                Largest FMI      =      0.0000
                                DF: min          =      6.01e+56
                                avg            =      2.48e+67
                                max            =      .
Model F test: Equal FMI          F( 6, 1.8e+65) =      38.69
                                Prob > F       =      0.0000

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pocschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
primary	.0379008	.0071607	5.29	0.000	.0238662	.0519355
middle	.056734	.0104648	5.42	0.000	.0362233	.0772447
high	.0484905	.0085671	5.66	0.000	.0316993	.0652818
lnage	-.0135443	.003089	-4.38	0.000	-.0195985	-.00749
lnstudents	-.0007739	.0034639	-0.22	0.823	-.0075629	.0060152
urban	.1100231	.0088529	12.43	0.000	.0926717	.1273746
_cons	.51009	.0361719	14.10	0.000	.4391943	.5809856

Random-effects Parameters		Estimate	Std. Err.	[95% Conf. Interval]	
<b>_all: Identity</b>					
sd(R.cmoname)		.1045317	.0070408	.0916041	.1192839
<b>_all: Identity</b>					
sd(R.state)		.1720183	.0220519	.1337997	.2211538
<b>geodistrict: Identity</b>					
sd(_cons)		.1947566	.0055156	.1842408	.2058726
sd(Residual)		.1716409	.0019105	.167937	.1754265

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8 . est store poc0

9 . est save "model_estimates/3a_schpoc_controls_mi100_linear_clusts.ster", replace
  (note: file model_estimates/3a_schpoc_controls_mi100_linear_clusts.ster not found)
  file model_estimates/3a_schpoc_controls_mi100_linear_clusts.ster saved

10. outreg2 using "tables/3a_schpoc_controls_mi100_linear_clusts.rtf", replace word labe
  > l onecol addstat(Log-Likelihood, e(ll), chi-square test, r(chi2), F-test, e(p), Prob
  > > F, r(p), R-squared, e(r2)) ///
  > alpha(.001, .01, .05) symbol(**, **, *) ///
  > addnote("", "Sources: American Community Survey 2012-16 (U.S. Census Bureau 2018), C
  > ommon Core of Data 2015-16 (NCES 2018), EdFacts Achievement Results for State Assess
  > ments (USDE 2018), and the author's data collection.") ///
  > title("TABLE 4", "Mixed Effects Models: Effects of IBL Emphasis and Academic Profici
  > ency on Number of Students of Color") ///
  > ctitle("M0: Controls only")
  (note: file tables/3a_schpoc_controls_mi100_linear_clusts.rtf not found)
  tables/3a_schpoc_controls_mi100_linear_clusts.rtf
  seeout

11.
12. * 1. IBL
13. *mi xeq 1 / 5: mixed pocschoolprop inquiry_full_log primary middle high lnage lnstud
  > ents urban pctpdfs || _all:R.cmoname || _all:R.state || geodistrict: , cov(unstructu
  > red)
14. mi est, dots post: mixed pocschoolprop inquiry_full_log primary middle high lnage ln
  > students urban pctpdfs || _all:R.cmoname || _all:R.state || geodistrict: , cov(unstr
  > uctured)

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Imputations (100):

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.....10.....20.....30.....40.....50.....60.....70.....
> ..80.....90.....100 done

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Multiple-imputation estimates	Imputations	=	100
Mixed-effects ML regression	Number of obs	=	5,784

Group Variable	No. of Groups	Observations per Group		
		Minimum	Average	Maximum
<b>_all</b>	<b>1</b>	<b>5,784</b>	<b>5,784.0</b>	<b>5,784</b>
<b>geodistrict</b>	<b>1,481</b>	<b>1</b>	<b>3.9</b>	<b>251</b>

DF adjustment: <b>Large sample</b>		Average RVI	=	<b>0.0000</b>
		Largest FMI	=	<b>0.0000</b>
		DF: min	=	<b>3.22e+64</b>
		avg	=	<b>3.22e+64</b>
		max	=	<b>.</b>
Model F test: <b>Equal FMI</b>		F( 8, 1.6e+67)	=	<b>50.90</b>
		Prob > F	=	<b>0.0000</b>

pocschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
inquiry_full_log	-.3096746	.0238338	-12.99	0.000	-.356388	-.2629613
primary	.0375302	.0070513	5.32	0.000	.02371	.0513504
middle	.052509	.0103082	5.09	0.000	.0323053	.0727127
high	.0452528	.0084402	5.36	0.000	.0287104	.0617952
lnage	-.0147347	.0030435	-4.84	0.000	-.0206999	-.0087696
lnstudents	.0021921	.0034223	0.64	0.522	-.0045156	.0088997
urban	.1119548	.0087322	12.82	0.000	.0948401	.1290695
pctpdfs	.1158298	.0595079	1.95	0.052	-.0008036	.2324632
_cons	.5343757	.035846	14.91	0.000	.4641188	.6046325

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
<b>_all:</b> Identity sd(R.cmoname)	<b>.1048088</b>	<b>.0069897</b>	<b>.0919668</b>	<b>.119444</b>
<b>_all:</b> Identity sd(R.state)	<b>.1706362</b>	<b>.0218908</b>	<b>.1327002</b>	<b>.2194174</b>
<b>geodistrict:</b> Identity sd(_cons)	<b>.1934251</b>	<b>.0054651</b>	<b>.183005</b>	<b>.2044386</b>
sd(Residual)	<b>.1687683</b>	<b>.0018816</b>	<b>.1651206</b>	<b>.1724967</b>

15. est store poc1

16. est save "model\_estimates/3b\_schpoc\_ibl\_mi100\_linear\_clusts.ster", replace  
(note: file model\_estimates/3b\_schpoc\_ibl\_mi100\_linear\_clusts.ster not found)  
file model\_estimates/3b\_schpoc\_ibl\_mi100\_linear\_clusts.ster saved

17. outreg2 using "tables/3b\_schpoc\_ibl\_mi100\_linear\_clusts.rtf", replace word label one  
> col addstat(Log-Likelihood, e(ll), chi-square test, r(chi2), F-test, e(p), Prob > F,  
> r(p), R-squared, e(r2)) ///  
> alpha(.001, .01, .05) symbol(\*\*, \*\*, \*) ///  
> ctitle("M1: IBL emphasis")  
(note: file tables/3b\_schpoc\_ibl\_mi100\_linear\_clusts.rtf not found)  
tables/3b\_schpoc\_ibl\_mi100\_linear\_clusts.rtf  
seeout

18.

19. \* 2. academic performance

20. \*mi xeq 1: mixed pocschoolprop readall14 mathall14 primary middle high lnage lnstude  
> nts urban readlevel14 mathlevel14 || \_all:R.cmoname || \_all:R.state || geodistrict:  
> , cov(unstructured)

21. mi est, dots post: mixed pocschoolprop readall14 mathall14 primary middle high lnage  
> lnstudents urban readlevel14 mathlevel14 || \_all:R.cmoname || \_all:R.state || geodi  
> strict: , cov(unstructured)

Imputations (100):

.....10.....20.....30.....40.....50.....60.....70.....  
> ..80.....90.....100 done

Multiple-imputation estimates  
Mixed-effects ML regression

Imputations = 100  
Number of obs = 5,784

Group Variable	No. of Groups	Observations per Group		
		Minimum	Average	Maximum
<b>_all</b>	<b>1</b>	<b>5,784</b>	<b>5,784.0</b>	<b>5,784</b>
<b>geodistrict</b>	<b>1,481</b>	<b>1</b>	<b>3.9</b>	<b>251</b>

DF adjustment:	Large sample	Average RVI	=	0.1085
		Largest FMI	=	0.3347
		DF: min	=	891.59
		avg	=	990,709.76
Model F test:	Equal FMI	max	=	1.20e+07
		F( 10, 53648.8)	=	113.81
		Prob > F	=	0.0000

pocschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
readall14	-.345159	.0224477	-15.38	0.000	-.3891913	-.3011267
mathall14	-.0643783	.0227797	-2.83	0.005	-.1090658	-.0196909
primary	.0462504	.0066837	6.92	0.000	.0331505	.0593504
middle	.0619026	.0097987	6.32	0.000	.0426975	.0811078
high	.0618884	.0081287	7.61	0.000	.0459563	.0778205
lnage	-.0043865	.0029031	-1.51	0.131	-.0100766	.0013036
lnstudents	.0156957	.0038987	4.03	0.000	.0080527	.0233386
urban	.1023277	.0081994	12.48	0.000	.086257	.1183983
readlevel14	.0005229	.0007716	0.68	0.498	-.0009913	.0020372
mathlevel14	-.0001844	.0007408	-0.25	0.803	-.001638	.0012692
_cons	.592722	.0378199	15.67	0.000	.5185931	.666851

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
_all: Identity				
sd(R.cmoname)	.1066026	.0067879	.0940953	.1207724
_all: Identity				
sd(R.state)	.1679018	.0210976	.1312496	.2147893
geodistrict: Identity				
sd(_cons)	.1831707	.0052302	.1732012	.193714
sd(Residual)	.1564415	.001785	.1529817	.1599795

22. est store poc2

23. est save "model\_estimates/3c\_schpoc\_acad\_mi100\_linear\_clusts.ster", replace  
(note: file model\_estimates/3c\_schpoc\_acad\_mi100\_linear\_clusts.ster not found)  
file model\_estimates/3c\_schpoc\_acad\_mi100\_linear\_clusts.ster saved

24.

25. \* 3. fully specified

26. \*mi xeq 1: mixed pocschoolprop inquiry\_full\_log readall14 mathall14 primary middle h  
> igh lnage lnstudents urban pctpdfs readlevel14 mathlevel14 || \_all:R.cmoname || \_all  
> :R.state || geodistrict: , cov(unstructured)

27. mi est, dots post: mixed pocschoolprop inquiry\_full\_log readall14 mathall14 primary  
> middle high lnage lnstudents urban pctpdfs readlevel14 mathlevel14 || \_all:R.cmoname  
> || \_all:R.state || geodistrict: , cov(unstructured)

Imputations (100):

.....10.....20.....30.....40.....50.....60.....70.....  
> ..80.....90.....100 done

Multiple-imputation estimates

Mixed-effects ML regression

Imputations = 100  
Number of obs = 5,784

Group Variable	No. of Groups	Observations per Group		
		Minimum	Average	Maximum
_all	1	5,784	5,784.0	5,784
geodistrict	1,481	1	3.9	251

		Average RVI	=	0.0971
		Largest FMI	=	0.3278
DF adjustment:	Large sample	DF: min	=	929.58
		avg	=	982,853.74
		max	=	1.31e+07
Model F test:	Equal FMI	F( 12, 85976.3)	=	106.12
		Prob > F	=	0.0000

pocschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
inquiry_full_log	-.2244583	.0224582	-9.99	0.000	-.2684757	-.1804408
readall14	-.3248825	.0223863	-14.51	0.000	-.3687949	-.2809701
mathall14	-.0700227	.0226003	-3.10	0.002	-.1143588	-.0256865
primary	.0457818	.0066151	6.92	0.000	.0328164	.0587473
middle	.0584276	.0097049	6.02	0.000	.0394063	.077449
high	.0590745	.0080504	7.34	0.000	.0432957	.0748532
lnage	-.0056046	.0028747	-1.95	0.051	-.0112389	.0000298
lnstudents	.016859	.0038587	4.37	0.000	.0092945	.0244235
urban	.103844	.0081316	12.77	0.000	.0879062	.1197817
pctpdfs	.1049893	.0558249	1.88	0.060	-.0044266	.2144052
readlevel14	.0005419	.0007601	0.71	0.476	-.0009498	.0020336
mathlevel14	-.0002716	.0007306	-0.37	0.710	-.0017052	.001162
_cons	.609137	.0375523	16.22	0.000	.5355327	.6827413

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
_all: Identity				
sd(R.cmoname)	.1056603	.0067052	.0933028	.1196545
_all: Identity				
sd(R.state)	.1669188	.0210072	.1304304	.2136149
geodistrict: Identity				
sd(_cons)	.1828916	.0052017	.1729754	.1933763
sd(Residual)	.1548023	.0017661	.1513792	.1583027

28. est store poc3

29. est save "model\_estimates/3d\_schpoc\_full\_mi100\_linear\_clusts.ster", replace  
(note: file model\_estimates/3d\_schpoc\_full\_mi100\_linear\_clusts.ster not found)  
file model\_estimates/3d\_schpoc\_full\_mi100\_linear\_clusts.ster saved

30. outreg2 using "tables/3d\_schpoc\_full\_mi100\_linear\_clusts.rtf", replace word label on  
> ecol addstat(Log-Likelihood, e(ll), chi-square test, r(chi2), F-test, e(p), Prob > F  
> , r(p), R-squared, e(r2)) ///  
> alpha(.001, .01, .05) symbol(\*\*\*, \*\*, \*) ///  
> ctitle("M3: Fully specified")  
(note: file tables/3d\_schpoc\_full\_mi100\_linear\_clusts.rtf not found)  
tables/3d\_schpoc\_full\_mi100\_linear\_clusts.rtf  
seeout

31.

32. log close  
name: <unnamed>  
log: /hdir/0/jhaber/Projects/charter\_data/sorting-schools-2019/logs/results\_3\_  
> schpoc\_mi100\_linear\_clusts\_101019.smcl  
log type: smcl  
closed on: 3 Nov 2019, 18:37:37