



```

name: <unnamed>
log: /hdir/0/jhaber/Projects/charter_data/sorting-schools-2019/logs/robust_lag
> gedscores_mi5_linear_101019.smcl
log type: smcl
opened on: 11 Oct 2019, 09:44:54

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1 . ** -----
2 . ** 1. ALTERNATIVE MEASURES I: LAGGED/NOT ACADEMIC PROFICIENCY RATES
3 . ** -----
4 .
5 . *
6 . * 1A. RE-RUN LINEAR MIXED MODELS USING LAGGED ACADEMIC SCORES: 2013-14
7 . *
8 .
9 . * PT 2:
10 . * 2. academic performance
11 . *mi xeq 1/ 5: mixed povertyschoolprop readall14 mathall14 primary middle high lnage
> linstudents urban readlevel14 mathlevel14 || geodistrict: ,
12 . mi est, dots post: mixed povertyschoolprop readall13 mathall13 primary middle high l
> nage linstudents urban readlevel13 mathlevel13 || geodistrict: ,

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Imputations (5):  
..... done

Multiple-imputation estimates	Imputations	=	5
Mixed-effects ML regression	Number of obs	=	5,784
Group variable: <b>geodistrict</b>	Number of groups	=	1,481
	Obs per group:		
	min	=	1
	avg	=	3.9
	max	=	251
	Average RVI	=	0.1874
	Largest FMI	=	0.4318
DF adjustment: <b>Large sample</b>	DF: min	=	26.28
	avg	=	660.89
	max	=	3,716.57
Model F test: <b>Equal FMI</b>	F( 10, 1025.8)	=	76.81
	Prob > F	=	0.0000

povertyschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
readall13	-.3413315	.02254	-15.14	0.000	-.3859447	-.2967183
mathall13	-.1591436	.0198899	-8.00	0.000	-.1982188	-.1200684
primary	.0195103	.0093579	2.08	0.038	.0010488	.0379718
middle	.0574455	.0131639	4.36	0.000	.0316309	.0832601
high	-.0129202	.0110599	-1.17	0.244	-.0347273	.0088869
lnage	.0114373	.0040638	2.81	0.006	.003369	.0195057
lnstudents	-.0028424	.0050509	-0.56	0.575	-.012922	.0072373
urban	.0552794	.0102517	5.39	0.000	.0351799	.0753789
readlevel13	-.0013694	.0010242	-1.34	0.191	-.003459	.0007201
mathlevel13	-.000165	.001045	-0.16	0.876	-.0023119	.0019818
_cons	.7818713	.0330686	23.64	0.000	.7156616	.8480811

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
<b>geodistrict: Identity</b>				
sd(_cons)	.1799182	.0060677	.1683955	.1922293
sd(Residual)	.2225619	.0024785	.2177424	.2274881

13. \* 3. fully specified

14. mi est, dots post: mixed povertyschoolprop inquiry\_full\_log readall13 mathall13 prim  
> ary middle high lnage lnstudents urban pctpdfs readlevel13 mathlevel13 || geodistrict  
> t: ,

Imputations (5):

..... done

Multiple-imputation estimates  
Mixed-effects ML regression

Imputations = 5  
Number of obs = 5,784

Group variable: **geodistrict**

Number of groups = 1,481  
Obs per group:

min = 1  
avg = 3.9  
max = 251

Average RVI = 0.1885

Largest FMI = 0.4736

DF adjustment: **Large sample**

DF: min = 21.88

avg = 608.92

max = 3,790.72

Model F test: **Equal FMI**

F( 12, 1301.6) = 69.71

Prob > F = 0.0000

povertyschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
inquiry_full_log	-.2314182	.0297153	-7.79	0.000	-.2899073	-.172929
readall13	-.3266978	.022489	-14.53	0.000	-.3712042	-.2821915
mathall13	-.1624696	.0198105	-8.20	0.000	-.2013913	-.1235478
primary	.0198868	.0093229	2.13	0.034	.0014911	.0382825
middle	.0537913	.0131199	4.10	0.000	.0280625	.07952
high	-.0145631	.0109506	-1.33	0.185	-.0361385	.0070122
lnage	.0104191	.0040419	2.58	0.011	.0023956	.0184426
lnstudents	-.0006067	.0050776	-0.12	0.905	-.0107614	.0095481
urban	.0575692	.0101587	5.67	0.000	.0376522	.0774863
pctpdfs	.0491725	.0780567	0.63	0.530	-.1051431	.2034881
readlevel13	-.0011705	.0010509	-1.11	0.276	-.0033336	.0009927
mathlevel13	-.0003653	.0010741	-0.34	0.737	-.0025936	.001863
_cons	.7956468	.0328968	24.19	0.000	.7298013	.8614923

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
<b>geodistrict: Identity</b>				
sd(_cons)	.1758616	.0060174	.1644401	.1880764
sd(Residual)	.2218461	.0024566	.2170714	.226726

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16. \* PT 3:

17. \* 2. academic performance

18. mi est, dots post: mixed pocschoolprop readall13 mathall13 primary middle high lnage  
> lnstudents urban readlevel13 mathlevel13 || state: || geodistrict: ,

Imputations (5):

..... done

Multiple-imputation estimates  
Mixed-effects ML regression

Imputations = 5  
Number of obs = 5,784

Group Variable	No. of Groups	Observations per Group		
		Minimum	Average	Maximum
<b>state</b>	<b>43</b>	<b>2</b>	<b>134.5</b>	<b>1,056</b>
<b>geodistrict</b>	<b>1,492</b>	<b>1</b>	<b>3.9</b>	<b>251</b>

DF adjustment: **Large sample**

Model F test: **Equal FMI**

Average RVI = 0.1522  
 Largest FMI = 0.3568  
 DF: min = 38.12  
 avg = 11,521.84  
 max = 114,767.81  
 F( 10, 1193.2) = 89.66  
 Prob > F = 0.0000

pocschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
readall13	-.299962	.0176197	-17.02	0.000	-.3346793	-.2652446
mathall13	-.0911574	.0169315	-5.38	0.000	-.1247411	-.0575737
primary	.0630132	.0070261	8.97	0.000	.0492303	.0767961
middle	.0913243	.0101779	8.97	0.000	.0713749	.1112736
high	.0512326	.0084292	6.08	0.000	.0346849	.0677804
lnage	-.0077063	.0030511	-2.53	0.012	-.013706	-.0017065
lnstudents	.0179543	.003754	4.78	0.000	.0105793	.0253293
urban	.0956041	.008721	10.96	0.000	.0785084	.1126999
readlevel13	-.0003966	.0007219	-0.55	0.584	-.0018286	.0010354
mathlevel13	-.0003621	.000783	-0.46	0.646	-.0019469	.0012228
_cons	.5849336	.0384345	15.22	0.000	.5093647	.6605025

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
<b>state:</b> Identity				
sd(_cons)	.1720038	.0218876	.1340358	.220727
<b>geodistrict:</b> Identity				
sd(_cons)	.1875811	.0054032	.1772832	.1984772
sd(Residual)	.1706159	.0019312	.1668642	.174452

19. \* 3. fully specified

20. mi est, dots post: mixed pocschoolprop inquiry\_full\_log readall13 mathall13 primary  
 > middle high lnage lnstudents urban pctpdfs readlevel13 mathlevel13 || state: || geod  
 > istrict: ,

Imputations (5):  
 ..... done

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

Group Variable	No. of Groups	Observations per Group		
		Minimum	Average	Maximum
<b>state</b>	<b>43</b>	<b>2</b>	<b>134.5</b>	<b>1,056</b>
<b>geodistrict</b>	<b>1,492</b>	<b>1</b>	<b>3.9</b>	<b>251</b>

DF adjustment: **Large sample**

Model F test: **Equal FMI**

Average RVI = 0.1303  
 Largest FMI = 0.3449  
 DF: min = 40.70  
 avg = 12,076.38  
 max = 133,851.71  
 F( 12, 2056.3) = 86.13  
 Prob > F = 0.0000

pocschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
inquiry_full_log	-.2297996	.0223217	-10.29	0.000	-.2735586	-.1860406
readall13	-.2837949	.0175422	-16.18	0.000	-.3183681	-.2492217
mathall13	-.09278	.0167191	-5.55	0.000	-.125928	-.0596321
primary	.0628862	.0069468	9.05	0.000	.0492597	.0765128
middle	.0871084	.0100807	8.64	0.000	.0673497	.1068672
high	.0495905	.0083095	5.97	0.000	.033283	.065898
lnage	-.0086089	.0030129	-2.86	0.004	-.0145317	-.0026861
lnstudents	.0199102	.0037361	5.33	0.000	.0125676	.0272527
urban	.0976563	.0086482	11.29	0.000	.0807037	.1146089
pctpdfs	.087631	.0573324	1.53	0.126	-.0247629	.2000249
readlevel13	-.0002293	.0007197	-0.32	0.751	-.001659	.0012003
mathlevel13	-.0005207	.0007692	-0.68	0.502	-.0020746	.0010331
_cons	.5989553	.0378569	15.82	0.000	.5245513	.6733593

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
<b>state:</b> Identity				
sd(_cons)	.1694104	.0216271	.1319088	.2175736
<b>geodistrict:</b> Identity				
sd(_cons)	.1876321	.0053751	.1773862	.1984699
sd(Residual)	.1686956	.0018978	.1650108	.1724627

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22.
23. *
24. * 1B. RE-RUN LINEAR MIXED MODELS USING NOT-LAGGED ACADEMIC SCORES: 2015-16
25. *
26.
27. * PT 2:
28. * 2. academic performance
29. mi est, dots post: mixed povertyschoolprop readall15 mathall15 primary middle high l
> nage lnstudents urban readlevel15 mathlevel15 || geodistrict: ,

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Imputations (5):  
..... done

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

Group variable: geodistrict      Number of groups   =    1,481
                                Obs per group:
                                min =      1
                                avg =     3.9
                                max =     251
                                Average RVI      =    0.1970
                                Largest FMI       =    0.2901
                                DF: min           =    56.75
                                avg              =    757.97
                                max              =   3,887.06
Model F test:                     Equal FMI       F( 10, 906.0)    =    89.28
                                Prob > F         =    0.0000

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povertyschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
readall15	-.4374085	.0311164	-14.06	0.000	-.499724	-.375093
mathall15	-.0695113	.0274153	-2.54	0.012	-.1234184	-.0156042
primary	.0072319	.008836	0.82	0.413	-.0101019	.0245657
middle	.0425153	.0132531	3.21	0.001	.0164912	.0685393
high	-.0011252	.011514	-0.10	0.922	-.0239566	.0217061
lnage	.0065937	.0038644	1.71	0.090	-.0010335	.0142209
lnstudents	-.0017939	.0049386	-0.36	0.717	-.0116086	.0080207
urban	.060079	.0101285	5.93	0.000	.0402164	.0799417
readlevel15	-9.09e-06	.0008218	-0.01	0.991	-.0016312	.001613

mathlevel15	-.0014516	.0008429	-1.72	0.090	-.0031361	.0002329
_cons	.7265816	.0318286	22.83	0.000	.6630687	.7900945

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
<b>geodistrict:</b> Identity				
sd(_cons)	.1726121	.0058807	.1614591	.1845356
sd(Residual)	.2208996	.0024236	.2161924	.2257093

30. \* 3. fully specified

31. mi est, dots post: mixed povertyschoolprop inquiry\_full\_log readall15 mathall15 prim  
> ary middle high lnage lnstudents urban pctpdfs readlevel15 mathlevel15 || geodistrict  
> t: ,

Imputations (5):  
..... done

Multiple-imputation estimates	Imputations	=	5
Mixed-effects ML regression	Number of obs	=	5,784
Group variable: <b>geodistrict</b>	Number of groups	=	1,481
	Obs per group:		
	min	=	1
	avg	=	3.9
	max	=	251
	Average RVI	=	0.1875
	Largest FMI	=	0.2633
DF adjustment: <b>Large sample</b>	DF: min	=	68.29
	avg	=	789.89
	max	=	5,063.75
Model F test: <b>Equal FMI</b>	F( 12, 1263.3)	=	80.35
	Prob > F	=	0.0000

povertyschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
inquiry_full_log	-.2129014	.0298439	-7.13	0.000	-.2717398	-.154063
readall15	-.417558	.030226	-13.81	0.000	-.4776883	-.3574276
mathall15	-.0782517	.0270377	-2.89	0.004	-.1313603	-.0251432
primary	.0082174	.0088045	0.93	0.351	-.0090553	.0254902
middle	.0398053	.0132411	3.01	0.003	.013799	.0658117
high	-.003011	.0114692	-0.26	0.793	-.0257544	.0197324
lnage	.0057787	.0038612	1.50	0.136	-.0018463	.0134036
lnstudents	.0003207	.0049421	0.06	0.948	-.0095085	.0101498
urban	.0621452	.0100556	6.18	0.000	.0424254	.0818651
pctpdfs	.0486785	.078469	0.62	0.536	-.1069068	.2042637
readlevel15	.0001881	.0008107	0.23	0.817	-.0014099	.001786
mathlevel15	-.0016095	.0008343	-1.93	0.058	-.0032742	.0000551
_cons	.7386671	.0315996	23.38	0.000	.675667	.8016672

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
<b>geodistrict:</b> Identity				
sd(_cons)	.169612	.0058335	.1585528	.1814425
sd(Residual)	.2201985	.0023964	.2155464	.2249509

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32.
33. * PT 3:
34. * 2. academic performance
35. mi est, dots post: mixed pocschoolprop readall15 mathall15 primary middle high lnage
> lstudents urban readlevel14 mathlevel14 || state: || geodistrict: ,

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Imputations (5):  
..... done

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

Group Variable	No. of Groups	Observations per Group		
		Minimum	Average	Maximum
<b>state</b>	<b>43</b>	<b>2</b>	<b>134.5</b>	<b>1,056</b>
<b>geodistrict</b>	<b>1,492</b>	<b>1</b>	<b>3.9</b>	<b>251</b>

DF adjustment:	<b>Large sample</b>	Average RVI	=	<b>0.1207</b>
		Largest FMI	=	<b>0.2975</b>
		DF: min	=	<b>54.08</b>
		avg	=	<b>374,335.73</b>
Model F test:	<b>Equal FMI</b>	max	=	<b>4890072.38</b>
		F( 10, 1714.7)	=	<b>104.48</b>
		Prob > F	=	<b>0.0000</b>

pocschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
readall15	-.3733962	.0237026	-15.75	0.000	-.4204171	-.3263754
mathall15	-.0165207	.022204	-0.74	0.457	-.0602063	.0271648
primary	.0533196	.0068255	7.81	0.000	.0399415	.0666977
middle	.0803313	.0100364	8.00	0.000	.0606601	.1000026
high	.0572731	.0082215	6.97	0.000	.0411548	.0733915
lnage	-.0102678	.002888	-3.56	0.000	-.0159297	-.0046058
lstudents	.0223791	.0036852	6.07	0.000	.015154	.0296041
urban	.0963228	.0085618	11.25	0.000	.0795418	.1131037
readlevel14	.0004945	.0007525	0.66	0.514	-.0010141	.0020031
mathlevel14	-.0005114	.0006797	-0.75	0.453	-.0018541	.0008314
_cons	.5143468	.0375216	13.71	0.000	.4407601	.5879335

Random-effects Parameters		Estimate	Std. Err.	[95% Conf. Interval]	
<b>state: Identity</b>					
	sd(_cons)	.174164	.0220247	.1359301	.2231521
<b>geodistrict: Identity</b>					
	sd(_cons)	.1879664	.0053542	.1777599	.198759
	sd(Residual)	.1684579	.0018887	.1647919	.1722056

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36. * 3. fully specified
37. mi est, dots post: mixed pocschoolprop inquiry_full_log readall15 mathall15 primary
> middle high lnage lstudents urban pctpdfs readlevel15 mathlevel15 || state: || geod
> istrict: ,

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Imputations (5):  
..... done

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

Group Variable	No. of Groups	Observations per Group		
		Minimum	Average	Maximum
<b>state</b>	<b>43</b>	<b>2</b>	<b>134.5</b>	<b>1,056</b>
<b>geodistrict</b>	<b>1,492</b>	<b>1</b>	<b>3.9</b>	<b>251</b>

DF adjustment: **Large sample**  
 Model F test: **Equal FMI**

Average RVI = 0.1109  
 Largest FMI = 0.2689  
 DF: min = 65.59  
 avg = 447,006.17  
 max = 6348123.82  
 F( 12, 2618.1) = 98.74  
 Prob > F = 0.0000

pocschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
inquiry_full_log	-.223964	.0221886	-10.09	0.000	-.2674714	-.1804566
readall15	-.3609509	.0223974	-16.12	0.000	-.40499	-.3169118
mathall15	-.0163646	.0221319	-0.74	0.460	-.0599152	.0271859
primary	.0530241	.0067632	7.84	0.000	.0397675	.0662807
middle	.0756071	.0100551	7.52	0.000	.0558903	.0953238
high	.0582946	.0082037	7.11	0.000	.0422111	.074378
lnage	-.0109634	.0028449	-3.85	0.000	-.0165404	-.0053865
lnstudents	.0228095	.0040581	5.62	0.000	.0147063	.0309126
urban	.0990674	.0084754	11.69	0.000	.0824559	.1156789
pctpdfs	.0923755	.0562474	1.64	0.101	-.0178731	.2026241
readlevel15	.0018764	.0006261	3.00	0.003	.0006443	.0031085
mathlevel15	-.0020793	.0005869	-3.54	0.000	-.0032312	-.0009274
_cons	.5396236	.0376497	14.33	0.000	.4656621	.613585

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
<b>state: Identity</b>				
sd(_cons)	.1727717	.021866	.134817	.2214118
<b>geodistrict: Identity</b>				
sd(_cons)	.1877967	.0053193	.1776551	.1985172
sd(Residual)	.1664455	.0018499	.1628566	.1701135

38.  
 39. log close  
     name: <unnamed>  
     log: /hdir/0/jhaber/Projects/charter\_data/sorting-schools-2019/logs/robust\_lag  
 > gedscores\_mi5\_linear\_101019.smcl  
     log type: smcl  
     closed on: 11 Oct 2019, 09:47:23