Statistics/Data Analysis

```
      name:  <unnamed>
       log:  /hdir/0/jhaber/Projects/charter_data/sorting-schools-2019/logs/results_2_
> schpov_mi100_linear_101019.smcl
  log type:  smcl
 opened on:  18 Oct 2019, 13:09:19

1 . ** ------------------------------------------------------
2 . ** MIXED-EFFECTS LINEAR MODELS PT 2: IBL, ACADEMICS -> POVERTY
3 . ** ------------------------------------------------------
4 .
5 . * Sequence of models:
6 . * 0. controls only
7 . * 1. IBL
8 . * 2. academic performance
9 . * 3. fully specified
10.
11. * 0. controls only
12. mi xeq 1 / 5: mixed povertyschoolprop primary middle high lnage lnstudents urban ||
  > geodistrict: ,

  m=1 data:
  -> mixed povertyschoolprop primary middle high lnage lnstudents urban || geodistrict:
  > ,

  Performing EM optimization:

  Performing gradient-based optimization:

  Iteration 0:   log likelihood = -593.78664
  Iteration 1:   log likelihood =  -593.7861
  Iteration 2:   log likelihood =  -593.7861

  Computing standard errors:

  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

                                                  Wald chi2(6)      =      71.25
  Log likelihood =  -593.7861                     Prob > chi2       =     0.0000
```

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
primary	-.0070241	.0092026	-0.76	0.445	-.0250608	.0110126
middle	.0301214	.0136499	2.21	0.027	.0033682	.0568747
high	-.0146316	.0109305	-1.34	0.181	-.036055	.0067918
lnage	.0018952	.0038566	0.49	0.623	-.0056635	.009454
lnstudents	-.017051	.0041157	-4.14	0.000	-.0251176	-.0089844
urban	.0695871	.0107462	6.48	0.000	.048525	.0906493
_cons	.5739023	.0249278	23.02	0.000	.5250447	.62276

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity				
var(_cons)	.0354138	.002377	.0310483	.0403931
var(Residual)	.057409	.0012142	.0550779	.0598387

```
  LR test vs. linear model: chibar2(01) = 1864.24       Prob >= chibar2 = 0.0000

  m=2 data:
  -> mixed povertyschoolprop primary middle high lnage lnstudents urban || geodistrict:
  > ,
```

```
Performing EM optimization:

Performing gradient-based optimization:

Iteration 0:   log likelihood = -581.75211
Iteration 1:   log likelihood = -581.75174
Iteration 2:   log likelihood = -581.75174

Computing standard errors:

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

                                                Wald chi2(6)      =      71.02
Log likelihood = -581.75174                     Prob > chi2       =     0.0000
```

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
primary	-.0006104	.0091708	-0.07	0.947	-.0185849	.0173641
middle	.0355269	.013594	2.61	0.009	.0088832	.0621707
high	-.010851	.0108922	-1.00	0.319	-.0321993	.0104973
lnage	.0012591	.0038444	0.33	0.743	-.0062758	.008794
lnstudents	-.0174034	.0041075	-4.24	0.000	-.025454	-.0093528
urban	.0676027	.0107748	6.27	0.000	.0464846	.0887209
_cons	.572649	.0248885	23.01	0.000	.5238684	.6214295

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity				
var(_cons)	.0370473	.0024504	.0325428	.0421753
var(Residual)	.0567264	.0012028	.0544173	.0591335

```
LR test vs. linear model: chibar2(01) = 1908.36       Prob >= chibar2 = 0.0000

m=3 data:
-> mixed povertyschoolprop primary middle high lnage lnstudents urban || geodistrict:
> ,

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0:   log likelihood = -580.99439
Iteration 1:   log likelihood = -580.99401
Iteration 2:   log likelihood = -580.99401

Computing standard errors:

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

                                                Wald chi2(6)      =      69.12
Log likelihood = -580.99401                     Prob > chi2       =     0.0000
```

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
primary	**-.0069814**	**.0091716**	**-0.76**	**0.447**	**-.0249573**	**.0109946**
middle	**.0339655**	**.0135964**	**2.50**	**0.012**	**.007317**	**.0606139**
high	**-.0112822**	**.0108931**	**-1.04**	**0.300**	**-.0326323**	**.010068**
lnage	**.0000429**	**.0038445**	**0.01**	**0.991**	**-.0074923**	**.0075781**
lnstudents	**-.0155476**	**.0041069**	**-3.79**	**0.000**	**-.0235971**	**-.0074982**
urban	**.0674663**	**.0107658**	**6.27**	**0.000**	**.0463657**	**.0885669**
_cons	**.5673472**	**.0248834**	**22.80**	**0.000**	**.5185766**	**.6161178**

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity var(_cons)	**.0367654**	**.0024344**	**.0322908**	**.0418602**
var(Residual)	**.0567786**	**.0012031**	**.0544689**	**.0591863**

LR test vs. linear model: chibar2(01) = **1899.41** Prob >= chibar2 = **0.0000**

m=4 data:
-> **mixed povertyschoolprop primary middle high lnage lnstudents urban || geodistrict:**
> ,

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log likelihood = **-602.0006**
Iteration 1: log likelihood = **-602.00005**
Iteration 2: log likelihood = **-602.00005**

Computing standard errors:

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**

Wald chi2(**6**) = **74.81**
Log likelihood = **-602.00005** — Prob > chi2 = **0.0000**

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
primary	**-.0037289**	**.0092135**	**-0.40**	**0.686**	**-.021787**	**.0143293**
middle	**.0326248**	**.0136646**	**2.39**	**0.017**	**.0058427**	**.059407**
high	**-.0122724**	**.0109434**	**-1.12**	**0.262**	**-.033721**	**.0091763**
lnage	**.0022103**	**.0038613**	**0.57**	**0.567**	**-.0053578**	**.0097784**
lnstudents	**-.0179826**	**.0041216**	**-4.36**	**0.000**	**-.0260608**	**-.0099043**
urban	**.0711847**	**.0107703**	**6.61**	**0.000**	**.0500753**	**.0922942**
_cons	**.5764377**	**.0249655**	**23.09**	**0.000**	**.5275063**	**.6253691**

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity var(_cons)	**.0358171**	**.0024053**	**.0314**	**.0408557**
var(Residual)	**.0574959**	**.0012174**	**.0551585**	**.0599322**

LR test vs. linear model: chibar2(01) = **1864.16** Prob >= chibar2 = **0.0000**

m=5 data:
-> **mixed povertyschoolprop primary middle high lnage lnstudents urban || geodistrict:**
> **,**

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log likelihood = **-583.05482**
Iteration 1: log likelihood = **-583.05436**
Iteration 2: log likelihood = **-583.05436**

Computing standard errors:

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**

Wald chi2(**6**) = **67.20**
Log likelihood = **-583.05436** — Prob > chi2 = **0.0000**

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
primary	**-.0041844**	**.009178**	**-0.46**	**0.648**	**-.0221729**	**.0138041**
middle	**.0350343**	**.0136081**	**2.57**	**0.010**	**.008363**	**.0617056**
high	**-.0134224**	**.0109009**	**-1.23**	**0.218**	**-.0347878**	**.007943**
lnage	**.000896**	**.0038469**	**0.23**	**0.816**	**-.0066438**	**.0084359**
lnstudents	**-.0138819**	**.0041083**	**-3.38**	**0.001**	**-.0219341**	**-.0058298**
urban	**.0688985**	**.0107572**	**6.40**	**0.000**	**.0478148**	**.0899823**
_cons	**.5555127**	**.0248893**	**22.32**	**0.000**	**.5067307**	**.6042948**

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity var(_cons)	**.0363512**	**.0024241**	**.0318974**	**.0414269**
var(Residual)	**.0569282**	**.0012066**	**.0546118**	**.0593429**

LR test vs. linear model: chibar2(01) = **1892.36** Prob >= chibar2 = **0.0000**

13. mi est, dots post: mixed povertyschoolprop primary middle high lnage lnstudents urba
> n || geodistrict: ,

Imputations (**100**):
.....10.....20.....30.....40.....50.....60.....70.....
> ..80.....90.....100 done

Multiple-imputation estimates — Imputations = **100**
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 = **0.0779**
Largest FMI = **0.1487**
DF adjustment: **Large sample** — DF: min = **4,497.28**
avg = **27,818.26**
max = **79,699.53**
Model F test: **Equal FMI** — F(**6**,**98447.2**) = **10.76**
Prob > F = **0.0000**

povertyschoolprop	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
primary	-.004292	.0095313	-0.45	0.652	-.0229741	.0143901
middle	.0335682	.0140704	2.39	0.017	.0059894	.0611469
high	-.0109707	.011304	-0.97	0.332	-.0331273	.011186
lnage	.0016697	.0039927	0.42	0.676	-.0061564	.0094958
lnstudents	-.01655	.0044561	-3.71	0.000	-.0252862	-.0078138
urban	.0687262	.0109795	6.26	0.000	.0472063	.0902461
_cons	.5679844	.0265824	21.37	0.000	.5158744	.6200944

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity sd(_cons)	.190685	.006461	.1784329	.2037785
sd(Residual)	.2388558	.0027042	.2336131	.2442161

14. est store pov0

15. ereturn list

scalars:

```
            e(small) =  0
         e(nrgroups) =  1
             e(ll_c) =  .
             e(k_rs) =  2
                e(N) =  5784
             e(df_c) =  .
             e(k_rc) =  0
               e(rc) =  0
                e(k) =  9
            e(k_res) =  0
        e(converged) =  1
        e(se_failed) =  0
              e(k_r) =  2
               e(ll) =  .
            e(mecmd) =  0
          e(chi2_c) =  .
               e(ic) =  2
         e(nostderr) =  0
             e(df_m) =  .
                e(p) =  .
              e(p_c) =  .
              e(k_f) =  7
             e(rank) =  .
             e(chi2) =  .
      e(_dfnote_mi) =  0
      e(mcerror_mi) =  0
        e(N_min_mi) =  5784
        e(N_max_mi) =  5784
      e(cilevel_mi) =  95
        e(k_exp_mi) =  0
    e(reparm_rc_mi) =  .
   e(k_eq_model_mi) =  3
       e(caller_mi) =  15.1
       e(df_min_mi) =  4497.276363213868
       e(df_avg_mi) =  27818.2648628275
       e(df_max_mi) =  79699.52905182705
      e(fmi_max_mi) =  .1487473563410777
      e(rvi_avg_mi) =  .0779233709019369
            e(p_mi) =  5.33353477671e-12
         e(ufmi_mi) =  0
     e(rvi_avg_F_mi) =  .0836301215558455
            e(F_mi) =  10.76142072923889
         e(df_m_mi) =  6
         e(df_r_mi) =  98447.18433108077
         e(df_c_mi) =  .
            e(N_mi) =  5784
```

```
              e(M_mi) =  100
       e(esampvary_mi) =  0

macros:
                 e(cmd) : "mixed"
          e(rstructure) : "independent"
          e(rstructlab) : "Independent"
               e(iccok) : "ok"
               e(redim) : "1"
           e(optmetric) : "matsqrt"
  e(datasignaturevars) : "povertyschoolprop primary middle high lnage lnstudents urban
>  g.."
            e(vartypes) : "Identity"
               e(title) : "Mixed-effects ML regression"
           e(stripe_se) : "povertyschoolprop:primary povertyschoolprop:middle povertysc
> ho.."
            e(chi2type) : "Wald"
           e(ml_method) : "d0"
              e(depvar) : "povertyschoolprop"
                 e(opt) : "moptimize"
            e(crittype) : "log likelihood"
              e(revars) : "_cons"
               e(ivars) : "geodistrict"
              e(method) : "ML"
           e(technique) : "nr"
             e(cmdline) : "mixed povertyschoolprop primary middle high lnage lnstudents
>  u.."
       e(names_vvl_mi) : "datasignature"
       e(names_vvs_mi) : "p chi2_c ll ll_c chi2"
       e(names_vvm_mi) : "b_sd se_sd V_sd"
              e(m_mi) : "1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
> 24.."
            e(m_est_mi) : "1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
> 24.."
               e(rc_mi) : "0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
> 0 .."
         e(dfadjust_mi) : "Large sample"
       e(modeltest_mi) : "Equal FMI"
            e(title_mi) : "Multiple-imputation estimates"
           e(prefix_mi) : "mi estimate"
              e(cmd_mi) : "mixed"
             e(ecmd_mi) : "mixed"
                 e(mi) : "mi"
          e(cmdline_mi) : "mi estimate , dots post: mixed povertyschoolprop primary mid
> dl.."
       e(_sortseed_mi) : "805327097XZA112210f4b16c1cb10507a1f38cb440c40003c9a83566fa12
> 01.."
     e(_sortseedcmd_mi) : "1245971257XZA112210f4b16c1cb10507a1f38cb440c40003c9a83566fa1
> 20.."
          e(properties) : "b V"

matrices:
                   e(b) :  1 x 9
                   e(V) :  9 x 9
                e(b_sd) :  1 x 1
              e(noomit) :  1 x 7
            e(b_pclass) :  1 x 9
               e(g_min) :  1 x 1
               e(se_sd) :  1 x 1
               e(g_max) :  1 x 1
               e(g_avg) :  1 x 1
                 e(N_g) :  1 x 1
                e(V_sd) :  1 x 1
               e(re_mi) :  1 x 9
              e(fmi_mi) :  1 x 9
             e(pise_mi) :  1 x 9
              e(rvi_mi) :  1 x 9
               e(df_mi) :  1 x 9
                e(W_mi) :  9 x 9
                e(B_mi) :  9 x 9
                e(V_mi) :  9 x 9
                e(b_mi) :  1 x 9
```

```
            e(N_g_mi) :  1 x 1
          e(g_min_mi) :  1 x 1
          e(g_avg_mi) :  1 x 1
          e(g_max_mi) :  1 x 1

16. est save "model_estimates/2a_schpov_controls_mi100_linear.ster", replace
  file model_estimates/2a_schpov_controls_mi100_linear.ster saved

17. outreg2 using "tables/2a_schpov_controls_mi100_linear.rtf", replace word label oneco
  > l 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 3", "Mixed Effects Models: Effects of IBL Emphasis and Academic Profici
  > ency on Number of Poor Students") ///
  > ctitle("M0: Controls only")
  tables/2a_schpov_controls_mi100_linear.rtf
  seeout

18.
19. * 1. IBL
20. mi xeq 1 / 5: mixed povertyschoolprop inquiry_full_log primary middle high lnage lns
  > tudents urban pctpdfs || geodistrict: ,

  m=1 data:
  -> mixed povertyschoolprop inquiry_full_log primary middle high lnage lnstudents urban
  >  pctpdfs || geodistrict: ,

  Performing EM optimization:

  Performing gradient-based optimization:

  Iteration 0:   log likelihood = -542.92962
  Iteration 1:   log likelihood = -542.92885
  Iteration 2:   log likelihood = -542.92885

  Computing standard errors:

  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

                                                  Wald chi2(8)      =     176.59
  Log likelihood = -542.92885                     Prob > chi2       =     0.0000
```

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
inquiry_full_log	-.3013695	.0297143	-10.14	0.000	-.3596084	-.2431306
primary	-.0058976	.009131	-0.65	0.518	-.0237941	.0119989
middle	.0263731	.0135587	1.95	0.052	-.0002016	.0529477
high	-.0171363	.0108477	-1.58	0.114	-.0383975	.0041249
lnage	.0009731	.0038267	0.25	0.799	-.0065271	.0084733
lnstudents	-.0135324	.0040938	-3.31	0.001	-.021556	-.0055088
urban	.0718933	.010619	6.77	0.000	.0510805	.0927061
pctpdfs	.0373291	.0761248	0.49	0.624	-.1118728	.186531
_cons	.5973318	.0248113	24.07	0.000	.5487025	.6459611

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity				
var(_cons)	**.0336658**	**.0022936**	**.0294577**	**.0384752**
var(Residual)	**.0566974**	**.0011985**	**.0543964**	**.0590958**

LR test vs. linear model: chibar2(01) = **1803.15** Prob >= chibar2 = **0.0000**

m=2 data:
-> **mixed povertyschoolprop inquiry_full_log primary middle high lnage lnstudents urban**
> pctpdfs || geodistrict: ,

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log likelihood = **-535.06562**
Iteration 1: log likelihood = **-535.06511**
Iteration 2: log likelihood = **-535.06511**

Computing standard errors:

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**

Wald chi2(**8**) = **167.51**
Log likelihood = **-535.06511** — Prob > chi2 = **0.0000**

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
inquiry_full_log	**-.2874095**	**.0296346**	**-9.70**	**0.000**	**-.3454923**	**-.2293267**
primary	**.0004629**	**.0091055**	**0.05**	**0.959**	**-.0173835**	**.0183093**
middle	**.0316865**	**.0135115**	**2.35**	**0.019**	**.0052045**	**.0581686**
high	**-.0132984**	**.0108167**	**-1.23**	**0.219**	**-.0344988**	**.007902**
lnage	**.0003571**	**.0038173**	**0.09**	**0.925**	**-.0071246**	**.0078388**
lnstudents	**-.0140832**	**.0040887**	**-3.44**	**0.001**	**-.022097**	**-.0060695**
urban	**.0697787**	**.0106602**	**6.55**	**0.000**	**.0488851**	**.0906723**
pctpdfs	**.0840359**	**.0759687**	**1.11**	**0.269**	**-.0648601**	**.2329318**
_cons	**.5949357**	**.0247913**	**24.00**	**0.000**	**.5463457**	**.6435257**

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity				
var(_cons)	**.0354231**	**.0023726**	**.0310653**	**.0403923**
var(Residual)	**.0560736**	**.0011884**	**.0537922**	**.0584518**

LR test vs. linear model: chibar2(01) = **1850.12** Prob >= chibar2 = **0.0000**

m=3 data:
-> **mixed povertyschoolprop inquiry_full_log primary middle high lnage lnstudents urban**
> pctpdfs || geodistrict: ,

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log likelihood = **-529.96664**
Iteration 1: log likelihood = **-529.9661**
Iteration 2: log likelihood = **-529.9661**

Computing standard errors:

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**

Wald chi2(**8**) = **174.63**
Log likelihood = **-529.9661** — Prob > chi2 = **0.0000**

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
inquiry_full_log	**-.3005907**	**.0296151**	**-10.15**	**0.000**	**-.3586352**	**-.2425462**
primary	**-.0058609**	**.0090996**	**-0.64**	**0.520**	**-.0236959**	**.0119741**
middle	**.0299976**	**.0135044**	**2.22**	**0.026**	**.0035295**	**.0564657**
high	**-.013826**	**.0108099**	**-1.28**	**0.201**	**-.0350131**	**.007361**
lnage	**-.0008904**	**.0038146**	**-0.23**	**0.815**	**-.0083669**	**.0065861**
lnstudents	**-.0120668**	**.0040851**	**-2.95**	**0.003**	**-.0200733**	**-.0040602**
urban	**.0697465**	**.0106418**	**6.55**	**0.000**	**.0488889**	**.0906042**
pctpdfs	**.076951**	**.0759109**	**1.01**	**0.311**	**-.0718315**	**.2257336**
_cons	**.5906526**	**.0247673**	**23.85**	**0.000**	**.5421097**	**.6391956**

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity var(_cons)	**.0350546**	**.0023525**	**.0307342**	**.0399823**
var(Residual)	**.0560516**	**.0011872**	**.0537724**	**.0584274**

LR test vs. linear model: chibar2(01) = **1839.74** Prob >= chibar2 = **0.0000**

m=4 data:
-> **mixed povertyschoolprop inquiry_full_log primary middle high lnage lnstudents urban**
> pctpdfs || geodistrict: ,

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log likelihood = **-551.82295**
Iteration 1: log likelihood = **-551.82219**
Iteration 2: log likelihood = **-551.82219**

Computing standard errors:

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**

Wald chi2(**8**) = **178.81**
Log likelihood = **-551.82219** — Prob > chi2 = **0.0000**

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
inquiry_full_log	**-.2995513**	**.0297537**	**-10.07**	**0.000**	**-.3578674**	**-.2412351**
primary	**-.0026173**	**.0091429**	**-0.29**	**0.775**	**-.0205371**	**.0153025**
middle	**.0286701**	**.0135749**	**2.11**	**0.035**	**.0020638**	**.0552764**
high	**-.014816**	**.0108618**	**-1.36**	**0.173**	**-.0361047**	**.0064727**
lnage	**.0012801**	**.0038319**	**0.33**	**0.738**	**-.0062304**	**.0087905**
lnstudents	**-.0145116**	**.0041002**	**-3.54**	**0.000**	**-.0225478**	**-.0064754**
urban	**.0734655**	**.0106447**	**6.90**	**0.000**	**.0526023**	**.0943286**
pctpdfs	**.0732813**	**.0762337**	**0.96**	**0.336**	**-.0761341**	**.2226967**
_cons	**.599683**	**.0248518**	**24.13**	**0.000**	**.5509743**	**.6483917**

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity var(_cons)	**.0340719**	**.0023202**	**.0298148**	**.0389369**
var(Residual)	**.0567942**	**.0012018**	**.0544869**	**.0591991**

LR test vs. linear model: chibar2(01) = **1805.48** Prob >= chibar2 = **0.0000**

m=5 data:
-> **mixed povertyschoolprop inquiry_full_log primary middle high lnage lnstudents urban**
> pctpdfs || geodistrict: ,

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log likelihood = **-536.41299**
Iteration 1: log likelihood = **-536.41234**
Iteration 2: log likelihood = **-536.41234**

Computing standard errors:

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**

Wald chi2(**8**) = **163.69**
Log likelihood = **-536.41234** — Prob > chi2 = **0.0000**

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
inquiry_full_log	**-.2877466**	**.0296579**	**-9.70**	**0.000**	**-.345875**	**-.2296183**
primary	**-.0031241**	**.0091131**	**-0.34**	**0.732**	**-.0209853**	**.0147372**
middle	**.0312301**	**.0135266**	**2.31**	**0.021**	**.0047185**	**.0577417**
high	**-.0158587**	**.010826**	**-1.46**	**0.143**	**-.0370773**	**.0053599**
lnage	**-5.61e-06**	**.0038199**	**-0.00**	**0.999**	**-.0074925**	**.0074813**
lnstudents	**-.0105523**	**.0040895**	**-2.58**	**0.010**	**-.0185676**	**-.002537**
urban	**.0710947**	**.0106402**	**6.68**	**0.000**	**.0502404**	**.0919491**
pctpdfs	**.072958**	**.0760088**	**0.96**	**0.337**	**-.0760166**	**.2219325**
_cons	**.5778711**	**.0247916**	**23.31**	**0.000**	**.5292805**	**.6264617**

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity var(_cons)	**.0346757**	**.002345**	**.030371**	**.0395904**
var(Residual)	**.0562921**	**.0011926**	**.0540025**	**.0586787**

LR test vs. linear model: chibar2(01) = **1831.74** Prob >= chibar2 = **0.0000**

```
21. mi est, dots post: mixed povertyschoolprop inquiry_full_log primary middle high lnag
> e lnstudents urban pctpdfs || geodistrict: ,

Imputations (100):
  .........10.........20.........30.........40.........50.........60.........70.......
> ..80.........90.........100 done

Multiple-imputation estimates                     Imputations       =        100
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       =     0.0746
                                                  Largest FMI       =     0.1491
DF adjustment:   Large sample                     DF:     min       =   4,473.56
                                                          avg       =  28,976.10
                                                          max       =  70,306.06
Model F test:       Equal FMI                     F(   8,153494.2)  =      20.08
                                                  Prob > F          =     0.0000
```

povertyschoolprop	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
inquiry_full_log	**-.2977676**	**.0305639**	**-9.74**	**0.000**	**-.3576743**	**-.2378609**
primary	**-.0031806**	**.0094609**	**-0.34**	**0.737**	**-.0217247**	**.0153636**
middle	**.0297414**	**.0139831**	**2.13**	**0.033**	**.0023338**	**.057149**
high	**-.0134721**	**.0112264**	**-1.20**	**0.230**	**-.0354767**	**.0085326**
lnage	**.0007513**	**.0039657**	**0.19**	**0.850**	**-.0070217**	**.0085244**
lnstudents	**-.0130837**	**.0044342**	**-2.95**	**0.003**	**-.021777**	**-.0043904**
urban	**.0709913**	**.0108581**	**6.54**	**0.000**	**.0497093**	**.0922732**
pctpdfs	**.0589501**	**.0777411**	**0.76**	**0.448**	**-.0934233**	**.2113234**
_cons	**.5910713**	**.0265118**	**22.29**	**0.000**	**.5390992**	**.6430434**

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity sd(_cons)	**.1862086**	**.0064022**	**.1740738**	**.1991893**
sd(Residual)	**.2373692**	**.0026893**	**.2321554**	**.2427002**

```
22. est store pov1

23. ereturn list

scalars:
              e(small) =  0
           e(nrgroups) =  1
               e(ll_c) =  .
               e(k_rs) =  2
                  e(N) =  5784
               e(df_c) =  .
               e(k_rc) =  0
                 e(rc) =  0
                  e(k) =  11
              e(k_res) =  0
          e(converged) =  1
```

```
          e(se_failed) =  0
                e(k_r) =  2
                 e(ll) =  .
              e(mecmd) =  0
             e(chi2_c) =  .
                 e(ic) =  2
           e(nostderr) =  0
               e(df_m) =  .
                  e(p) =  .
                e(p_c) =  .
                e(k_f) =  9
               e(rank) =  .
               e(chi2) =  .
         e(_dfnote_mi) =  0
         e(mcerror_mi) =  0
           e(N_min_mi) =  5784
           e(N_max_mi) =  5784
         e(cilevel_mi) =  95
           e(k_exp_mi) =  0
       e(reparm_rc_mi) =  .
      e(k_eq_model_mi) =  3
          e(caller_mi) =  15.1
          e(df_min_mi) =  4473.564127997978
          e(df_avg_mi) =  28976.09768582774
          e(df_max_mi) =  70306.06490588043
         e(fmi_max_mi) =  .1491418824198823
         e(rvi_avg_mi) =  .0745917510768661
               e(p_mi) =  1.21564759572e-30
           e(ufmi_mi) =  0
       e(rvi_avg_F_mi) =  .0769862889965729
               e(F_mi) =  20.08132249751691
            e(df_m_mi) =  8
            e(df_r_mi) =  153494.2482465238
            e(df_c_mi) =  .
               e(N_mi) =  5784
               e(M_mi) =  100
      e(esampvary_mi) =  0

macros:
                e(cmd) : "mixed"
         e(rstructure) : "independent"
         e(rstructlab) : "Independent"
              e(iccok) : "ok"
              e(redim) : "1"
          e(optmetric) : "matsqrt"
  e(datasignaturevars) : "povertyschoolprop inquiry_full_log primary middle high lnage
>  l.."
           e(vartypes) : "Identity"
              e(title) : "Mixed-effects ML regression"
          e(stripe_se) : "povertyschoolprop:inquiry_full_log povertyschoolprop:primary
>  p.."
           e(chi2type) : "Wald"
          e(ml_method) : "d0"
             e(depvar) : "povertyschoolprop"
                e(opt) : "moptimize"
           e(crittype) : "log likelihood"
             e(revars) : "_cons"
              e(ivars) : "geodistrict"
             e(method) : "ML"
          e(technique) : "nr"
            e(cmdline) : "mixed povertyschoolprop inquiry_full_log primary middle high
>  l.."
       e(names_vvl_mi) : "datasignature"
       e(names_vvs_mi) : "p chi2_c ll ll_c chi2"
       e(names_vvm_mi) : "b_sd se_sd V_sd"
               e(m_mi) : "1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
> 24.."
          e(m_est_mi) : "1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
> 24.."
              e(rc_mi) : "0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
> 0 .."
        e(dfadjust_mi) : "Large sample"
```

```
        e(modeltest_mi) : "Equal FMI"
            e(title_mi) : "Multiple-imputation estimates"
           e(prefix_mi) : "mi estimate"
              e(cmd_mi) : "mixed"
             e(ecmd_mi) : "mixed"
                  e(mi) : "mi"
          e(cmdline_mi) : "mi estimate , dots post: mixed povertyschoolprop inquiry_ful
> l_.."
        e(_sortseed_mi) : "678820841XZA112210f4b16c1cb10507a1f38cb440c40003c9a83566fa12
> 01.."
      e(_sortseedcmd_mi) : "1237264937XZA112210f4b16c1cb10507a1f38cb440c40003c9a83566fa1
> 20.."
           e(properties) : "b V"

  matrices:
                     e(b) :  1 x 11
                     e(V) :  11 x 11
                  e(b_sd) :  1 x 1
                e(noomit) :  1 x 9
              e(b_pclass) :  1 x 11
                 e(g_min) :  1 x 1
                 e(se_sd) :  1 x 1
                 e(g_max) :  1 x 1
                 e(g_avg) :  1 x 1
                   e(N_g) :  1 x 1
                  e(V_sd) :  1 x 1
                 e(re_mi) :  1 x 11
                e(fmi_mi) :  1 x 11
               e(pise_mi) :  1 x 11
                e(rvi_mi) :  1 x 11
                 e(df_mi) :  1 x 11
                  e(W_mi) :  11 x 11
                  e(B_mi) :  11 x 11
                  e(V_mi) :  11 x 11
                  e(b_mi) :  1 x 11
                e(N_g_mi) :  1 x 1
              e(g_min_mi) :  1 x 1
              e(g_avg_mi) :  1 x 1
              e(g_max_mi) :  1 x 1

24. est save "model_estimates/2b_schpov_ibl_mi100_linear.ster", replace
  file model_estimates/2b_schpov_ibl_mi100_linear.ster saved

25. outreg2 using "tables/2b_schpov_ibl_mi100_linear.rtf", replace word label onecol add
  > stat(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")
  tables/2b_schpov_ibl_mi100_linear.rtf
  seeout

26.
27. * 2. academic performance
28. mi xeq 1 / 5: mixed povertyschoolprop readall14 mathall14 primary middle high lnage
  > lnstudents urban readlevel14 mathlevel14 || geodistrict: ,

  m=1 data:
  -> mixed povertyschoolprop readall14 mathall14 primary middle high lnage lnstudents ur
  > ban readlevel14 mathlevel14 || geodistrict: ,

  Performing EM optimization:

  Performing gradient-based optimization:

  Iteration 0:   log likelihood = -114.26683
  Iteration 1:   log likelihood = -114.26648
  Iteration 2:   log likelihood = -114.26648

  Computing standard errors:
```

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**

Wald chi2(**10**) = **1127.49**
Log likelihood = **-114.26648** — Prob > chi2 = **0.0000**

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
readall14	**-.4223912**	**.0248029**	**-17.03**	**0.000**	**-.471004**	**-.3737785**
mathall14	**-.0865321**	**.0244222**	**-3.54**	**0.000**	**-.1343987**	**-.0386655**
primary	**.0014271**	**.0085374**	**0.17**	**0.867**	**-.0153059**	**.01816**
middle	**.0361617**	**.0127389**	**2.84**	**0.005**	**.011194**	**.0611294**
high	**-.003633**	**.0102428**	**-0.35**	**0.723**	**-.0237085**	**.0164425**
lnage	**.0084137**	**.0035627**	**2.36**	**0.018**	**.001431**	**.0153964**
lnstudents	**9.07e-06**	**.0044526**	**0.00**	**0.998**	**-.008718**	**.0087361**
urban	**.0644207**	**.0098887**	**6.51**	**0.000**	**.0450392**	**.0838022**
readlevel14	**-.0010127**	**.0008162**	**-1.24**	**0.215**	**-.0026124**	**.000587**
mathlevel14	**.0007588**	**.0007938**	**0.96**	**0.339**	**-.0007971**	**.0023146**
_cons	**.7128139**	**.0283127**	**25.18**	**0.000**	**.657322**	**.7683059**

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity var(_cons)	**.0298218**	**.0019667**	**.0262059**	**.0339366**
var(Residual)	**.0486833**	**.0010245**	**.0467162**	**.0507332**

LR test vs. linear model: chibar2(01) = **1990.49** Prob >= chibar2 = **0.0000**

m=2 data:
-> **mixed povertyschoolprop readall14 mathall14 primary middle high lnage lnstudents ur**
> ban readlevel14 mathlevel14 || geodistrict: ,

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log likelihood = **-71.154289**
Iteration 1: log likelihood = **-71.154082**
Iteration 2: log likelihood = **-71.154082**

Computing standard errors:

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**

Wald chi2(**10**) = **1201.48**
Log likelihood = **-71.154082** — Prob > chi2 = **0.0000**

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
readall14	**-.4479594**	**.0249427**	**-17.96**	**0.000**	**-.4968461**	**-.3990726**
mathall14	**-.0709645**	**.0244419**	**-2.90**	**0.004**	**-.1188697**	**-.0230593**
primary	**.009012**	**.008468**	**1.06**	**0.287**	**-.007585**	**.0256091**
middle	**.0450104**	**.0126134**	**3.57**	**0.000**	**.0202886**	**.0697323**
high	**.0027566**	**.0101445**	**0.27**	**0.786**	**-.0171263**	**.0226395**
lnage	**.0088792**	**.0035366**	**2.51**	**0.012**	**.0019476**	**.0158108**
lnstudents	**.0025284**	**.0044046**	**0.57**	**0.566**	**-.0061045**	**.0111613**
urban	**.061445**	**.0098725**	**6.22**	**0.000**	**.0420952**	**.0807947**
readlevel14	**-.0005135**	**.0007872**	**-0.65**	**0.514**	**-.0020563**	**.0010293**
mathlevel14	**.0004654**	**.0007695**	**0.60**	**0.545**	**-.0010428**	**.0019736**
_cons	**.6977509**	**.027991**	**24.93**	**0.000**	**.6428896**	**.7526122**

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity var(_cons)	**.0311663**	**.002015**	**.0274569**	**.0353768**
var(Residual)	**.0475172**	**.0010023**	**.0455927**	**.0495229**

LR test vs. linear model: chibar2(01) = **2080.99** Prob >= chibar2 = **0.0000**

m=3 data:
-> **mixed povertyschoolprop readall14 mathall14 primary middle high lnage lnstudents ur**
> ban readlevel14 mathlevel14 || geodistrict: ,

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log likelihood = **-84.647029**
Iteration 1: log likelihood = **-84.646783**
Iteration 2: log likelihood = **-84.646783**

Computing standard errors:

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**

Wald chi2(**10**) = **1165.34**
Log likelihood = **-84.646783** — Prob > chi2 = **0.0000**

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
readall14	**-.4412667**	**.0249698**	**-17.67**	**0.000**	**-.4902066**	**-.3923268**
mathall14	**-.0734956**	**.0246354**	**-2.98**	**0.003**	**-.1217802**	**-.0252111**
primary	**.0023037**	**.0084935**	**0.27**	**0.786**	**-.0143432**	**.0189505**
middle	**.0397516**	**.0126722**	**3.14**	**0.002**	**.0149145**	**.0645886**
high	**.0036381**	**.0101905**	**0.36**	**0.721**	**-.0163349**	**.0236111**
lnage	**.0061976**	**.0035389**	**1.75**	**0.080**	**-.0007384**	**.0131337**
lnstudents	**.0033886**	**.0044767**	**0.76**	**0.449**	**-.0053855**	**.0121627**
urban	**.0607921**	**.0098797**	**6.15**	**0.000**	**.0414283**	**.080156**
readlevel14	**-.0002171**	**.0008364**	**-0.26**	**0.795**	**-.0018565**	**.0014223**
mathlevel14	**.0000304**	**.000823**	**0.04**	**0.970**	**-.0015826**	**.0016434**
_cons	**.6998982**	**.0283866**	**24.66**	**0.000**	**.6442614**	**.7555349**

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity var(_cons)	**.0307552**	**.0020015**	**.0270723**	**.0349391**
var(Residual)	**.0478767**	**.0010093**	**.0459388**	**.0498963**

LR test vs. linear model: chibar2(01) = **2042.27** Prob >= chibar2 = **0.0000**

m=4 data:
-> **mixed povertyschoolprop readall14 mathall14 primary middle high lnage lnstudents ur**
> ban readlevel14 mathlevel14 || geodistrict: ,

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log likelihood = **-100.92527**
Iteration 1: log likelihood = **-100.9249**
Iteration 2: log likelihood = **-100.9249**

Computing standard errors:

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**

Wald chi2(**10**) = **1183.36**
Log likelihood = **-100.9249** — Prob > chi2 = **0.0000**

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
readall14	**-.4520717**	**.0250581**	**-18.04**	**0.000**	**-.5011848**	**-.4029587**
mathall14	**-.0615927**	**.0249141**	**-2.47**	**0.013**	**-.1104234**	**-.012762**
primary	**.002589**	**.0085362**	**0.30**	**0.762**	**-.0141416**	**.0193195**
middle	**.0348787**	**.0127157**	**2.74**	**0.006**	**.0099564**	**.0598009**
high	**.0054135**	**.010226**	**0.53**	**0.597**	**-.0146292**	**.0254561**
lnage	**.0075632**	**.0035498**	**2.13**	**0.033**	**.0006057**	**.0145208**
lnstudents	**-.0042513**	**.0044644**	**-0.95**	**0.341**	**-.0130013**	**.0044988**
urban	**.0628178**	**.009879**	**6.36**	**0.000**	**.0434552**	**.0821803**
readlevel14	**-.000906**	**.0008162**	**-1.11**	**0.267**	**-.0025056**	**.0006937**
mathlevel14	**-.000031**	**.0007845**	**-0.04**	**0.968**	**-.0015686**	**.0015067**
_cons	**.7476295**	**.028481**	**26.25**	**0.000**	**.6918077**	**.8034513**

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity var(_cons)	**.0299843**	**.0019811**	**.0263423**	**.0341299**
var(Residual)	**.0483833**	**.0010199**	**.0464251**	**.050424**

LR test vs. linear model: chibar2(01) = **2003.73** Prob >= chibar2 = **0.0000**

m=5 data:
-> **mixed povertyschoolprop readall14 mathall14 primary middle high lnage lnstudents ur**
> ban readlevel14 mathlevel14 || geodistrict: ,

Performing EM optimization:

Performing gradient-based optimization:

```
Iteration 0:   log likelihood = -89.147293
Iteration 1:   log likelihood = -89.147014
Iteration 2:   log likelihood = -89.147014

Computing standard errors:

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

                                                Wald chi2(10)     =    1156.99
Log likelihood = -89.147014                     Prob > chi2       =     0.0000
```

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
readall14	-.4486126	.0247941	-18.09	0.000	-.4972082	-.4000169
mathall14	-.0611185	.0243488	-2.51	0.012	-.1088413	-.0133957
primary	.003239	.0084939	0.38	0.703	-.0134088	.0198868
middle	.0400463	.012655	3.16	0.002	.0152429	.0648497
high	-.0004978	.0102075	-0.05	0.961	-.0205042	.0195086
lnage	.0082259	.0035483	2.32	0.020	.0012714	.0151805
lnstudents	.0028197	.004417	0.64	0.523	-.0058374	.0114768
urban	.0632637	.009879	6.40	0.000	.0439012	.0826261
readlevel14	-.0003552	.0007932	-0.45	0.654	-.00191	.0011995
mathlevel14	.0000617	.0007732	0.08	0.936	-.0014538	.0015772
_cons	.6976955	.0281137	24.82	0.000	.6425936	.7527974

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity var(_cons)	.030572	.0019989	.0268949	.0347519
var(Residual)	.0480086	.0010123	.046065	.0500343

LR test vs. linear model: chibar2(01) = **2037.60** Prob >= chibar2 = **0.0000**

```
29. mi est, dots post: mixed povertyschoolprop readall14 mathall14 primary middle high l
  > nage lnstudents urban readlevel14 mathlevel14 || geodistrict: ,

  Imputations (100):
    .........10.........20.........30.........40.........50.........60.........70.......
  > ..80.........90.........100 done

  Multiple-imputation estimates                 Imputations       =        100
  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       =     0.1969
                                                Largest FMI       =     0.3142
  DF adjustment:   Large sample                 DF:     min       =   1,011.37
                                                        avg       =   8,294.87
                                                        max       =  30,832.09
  Model F test:       Equal FMI                 F(  10,29828.3)   =      94.08
                                                Prob > F          =     0.0000
```

povertyschoolprop	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
readall14	-.449672	.0302369	-14.87	0.000	-.5090064	-.3903377
mathall14	-.058741	.0298165	-1.97	0.049	-.117249	-.000233
primary	.0030309	.0090121	0.34	0.737	-.0146349	.0206966
middle	.0396107	.01335	2.97	0.003	.0134422	.0657792
high	.0041614	.0108267	0.38	0.701	-.0170615	.0253844
lnage	.0087121	.003761	2.32	0.021	.0013396	.0160846
lnstudents	-.0005256	.0051184	-0.10	0.918	-.0105649	.0095138
urban	.0626821	.0101828	6.16	0.000	.0427235	.0826408
readlevel14	-.0000386	.0009411	-0.04	0.967	-.0018846	.0018073
mathlevel14	-.0004305	.0009286	-0.46	0.643	-.0022521	.0013911
_cons	.7157382	.0327165	21.88	0.000	.6515655	.7799109

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity sd(_cons)	.1746775	.0058841	.163517	.1865998
sd(Residual)	.219557	.0025951	.2145265	.2247054

30. est store pov2

31. ereturn list

scalars:

```
            e(small) =  0
         e(nrgroups) =  1
             e(ll_c) =  .
             e(k_rs) =  2
                e(N) =  5784
             e(df_c) =  .
             e(k_rc) =  0
               e(rc) =  0
                e(k) =  13
            e(k_res) =  0
        e(converged) =  1
        e(se_failed) =  0
              e(k_r) =  2
               e(ll) =  .
            e(mecmd) =  0
           e(chi2_c) =  .
               e(ic) =  2
         e(nostderr) =  0
             e(df_m) =  .
                e(p) =  .
              e(p_c) =  .
              e(k_f) =  11
             e(rank) =  .
             e(chi2) =  .
      e(_dfnote_mi) =  0
      e(mcerror_mi) =  0
        e(N_min_mi) =  5784
        e(N_max_mi) =  5784
      e(cilevel_mi) =  95
         e(k_exp_mi) =  0
    e(reparm_rc_mi) =  .
   e(k_eq_model_mi) =  3
       e(caller_mi) =  15.1
       e(df_min_mi) =  1011.374573554203
       e(df_avg_mi) =  8294.872789026604
       e(df_max_mi) =  30832.08887131442
      e(fmi_max_mi) =  .3142231028109119
      e(rvi_avg_mi) =  .1969408320396246
            e(p_mi) =  1.3466758789e-192
        e(ufmi_mi) =  0
    e(rvi_avg_F_mi) =  .2217832244519184
            e(F_mi) =  94.0770654645649
```

```
            e(df_m_mi) =  10
            e(df_r_mi) =  29828.31345929467
            e(df_c_mi) =  .
               e(N_mi) =  5784
               e(M_mi) =  100
        e(esampvary_mi) =  0

macros:
                 e(cmd) : "mixed"
          e(rstructure) : "independent"
          e(rstructlab) : "Independent"
               e(iccok) : "ok"
               e(redim) : "1"
           e(optmetric) : "matsqrt"
  e(datasignaturevars) : "povertyschoolprop readall14 mathall14 primary middle high ln
> ag.."
            e(vartypes) : "Identity"
               e(title) : "Mixed-effects ML regression"
           e(stripe_se) : "povertyschoolprop:readall14 povertyschoolprop:mathall14 pove
> rt.."
            e(chi2type) : "Wald"
           e(ml_method) : "d0"
              e(depvar) : "povertyschoolprop"
                 e(opt) : "moptimize"
            e(crittype) : "log likelihood"
              e(revars) : "_cons"
               e(ivars) : "geodistrict"
              e(method) : "ML"
           e(technique) : "nr"
             e(cmdline) : "mixed povertyschoolprop readall14 mathall14 primary middle h
> ig.."
        e(names_vvl_mi) : "datasignature"
        e(names_vvs_mi) : "p chi2_c ll ll_c chi2"
        e(names_vvm_mi) : "b_sd se_sd V_sd"
              e(m_mi) : "1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
> 24.."
          e(m_est_mi) : "1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
> 24.."
             e(rc_mi) : "0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
> 0 .."
         e(dfadjust_mi) : "Large sample"
        e(modeltest_mi) : "Equal FMI"
            e(title_mi) : "Multiple-imputation estimates"
           e(prefix_mi) : "mi estimate"
              e(cmd_mi) : "mixed"
             e(ecmd_mi) : "mixed"
                 e(mi) : "mi"
          e(cmdline_mi) : "mi estimate , dots post: mixed povertyschoolprop readall14 m
> at.."
       e(_sortseed_mi) : "1482720201XZA112210f4b16c1cb10507a1f38cb440c40003c9a83566fa1
> 20.."
    e(_sortseedcmd_mi) : "1869163017XZA112210f4b16c1cb10507a1f38cb440c40003c9a83566fa1
> 20.."
          e(properties) : "b V"

matrices:
                   e(b) :  1 x 13
                   e(V) :  13 x 13
                e(b_sd) :  1 x 1
              e(noomit) :  1 x 11
             e(b_pclass) :  1 x 13
                e(g_min) :  1 x 1
                e(se_sd) :  1 x 1
                e(g_max) :  1 x 1
                e(g_avg) :  1 x 1
                  e(N_g) :  1 x 1
                 e(V_sd) :  1 x 1
                e(re_mi) :  1 x 13
               e(fmi_mi) :  1 x 13
              e(pise_mi) :  1 x 13
               e(rvi_mi) :  1 x 13
                e(df_mi) :  1 x 13
```

```
              e(W_mi) :  13 x 13
              e(B_mi) :  13 x 13
              e(V_mi) :  13 x 13
              e(b_mi) :  1 x 13
            e(N_g_mi) :  1 x 1
          e(g_min_mi) :  1 x 1
          e(g_avg_mi) :  1 x 1
          e(g_max_mi) :  1 x 1

32. est save "model_estimates/2c_schpov_acad_mi100_linear.ster", replace
  file model_estimates/2c_schpov_acad_mi100_linear.ster saved

33. outreg2 using "tables/2c_schpov_acad_mi100_linear.rtf", replace word label onecol ad
  > dstat(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("M2: Academic proficiency")
  tables/2c_schpov_acad_mi100_linear.rtf
  seeout

34.
35. * 3. fully specified
36. mi xeq 1 / 5: mixed povertyschoolprop inquiry_full_log readall14 mathall14 primary m
  > iddle high lnage lnstudents urban pctpdfs readlevel14 mathlevel14 || geodistrict: ,

  m=1 data:
  -> mixed povertyschoolprop inquiry_full_log readall14 mathall14 primary middle high ln
  > age lnstudents urban pctpdfs readlevel14 mathlevel14 || geodistrict: ,

  Performing EM optimization:

  Performing gradient-based optimization:

  Iteration 0:   log likelihood = -87.48963
  Iteration 1:   log likelihood = -87.48914
  Iteration 2:   log likelihood = -87.48914

  Computing standard errors:

  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

                                                  Wald chi2(12)     =    1193.36
  Log likelihood = -87.48914                      Prob > chi2       =     0.0000
```

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
inquiry_full_log	-.2036755	.0277144	-7.35	0.000	-.2579947	-.1493562
readall14	-.402661	.0248544	-16.20	0.000	-.4513747	-.3539474
mathall14	-.0947381	.024348	-3.89	0.000	-.1424593	-.0470169
primary	.0022698	.0085057	0.27	0.790	-.014401	.0189405
middle	.0333495	.012705	2.62	0.009	.0084482	.0582507
high	-.0054002	.0102068	-0.53	0.597	-.0254051	.0146047
lnage	.007484	.0035504	2.11	0.035	.0005254	.0144427
lnstudents	.0016074	.0044377	0.36	0.717	-.0070903	.0103051
urban	.066285	.0098167	6.75	0.000	.0470447	.0855253
pctpdfs	.0357182	.070369	0.51	0.612	-.1022025	.1736388
readlevel14	-.0008929	.0008134	-1.10	0.272	-.0024871	.0007013
mathlevel14	.0005809	.0007914	0.73	0.463	-.0009702	.002132
_cons	.7271965	.028255	25.74	0.000	.6718178	.7825752

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity var(_cons)	**.0286994**	**.0019187**	**.0251748**	**.0327176**
var(Residual)	**.0484519**	**.0010193**	**.0464948**	**.0504915**

LR test vs. linear model: chibar2(01) = **1908.37** Prob >= chibar2 = **0.0000**

m=2 data:
-> **mixed povertyschoolprop inquiry_full_log readall14 mathall14 primary middle high ln**
> age lnstudents urban pctpdfs readlevel14 mathlevel14 || geodistrict: ,

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log likelihood = **-47.05702**
Iteration 1: log likelihood = **-47.056742**
Iteration 2: log likelihood = **-47.056742**

Computing standard errors:

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**

Wald chi2(**12**) = **1261.02**
Log likelihood = **-47.056742** — Prob > chi2 = **0.0000**

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
inquiry_full_log	**-.1908215**	**.0274737**	**-6.95**	**0.000**	**-.244669**	**-.1369739**
readall14	**-.4292609**	**.0250034**	**-17.17**	**0.000**	**-.4782667**	**-.3802551**
mathall14	**-.0795801**	**.0243842**	**-3.26**	**0.001**	**-.1273722**	**-.0317879**
primary	**.0098007**	**.0084397**	**1.16**	**0.246**	**-.0067409**	**.0263423**
middle	**.042161**	**.0125839**	**3.35**	**0.001**	**.0174971**	**.066825**
high	**.0010256**	**.0101126**	**0.10**	**0.919**	**-.0187948**	**.020846**
lnage	**.0080014**	**.0035258**	**2.27**	**0.023**	**.0010909**	**.0149119**
lnstudents	**.0040333**	**.0043922**	**0.92**	**0.358**	**-.0045754**	**.0126419**
urban	**.0631837**	**.0098109**	**6.44**	**0.000**	**.0439546**	**.0824128**
pctpdfs	**.0670997**	**.0698263**	**0.96**	**0.337**	**-.0697574**	**.2039568**
readlevel14	**-.0003485**	**.000785**	**-0.44**	**0.657**	**-.001887**	**.00119**
mathlevel14	**.0002619**	**.0007677**	**0.34**	**0.733**	**-.0012428**	**.0017665**
_cons	**.7111904**	**.0279501**	**25.45**	**0.000**	**.6564092**	**.7659716**

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity var(_cons)	**.0301792**	**.001973**	**.0265497**	**.0343049**
var(Residual)	**.0473028**	**.0009976**	**.0453874**	**.049299**

LR test vs. linear model: chibar2(01) = **2003.17** Prob >= chibar2 = **0.0000**

m=3 data:
-> **mixed povertyschoolprop inquiry_full_log readall14 mathall14 primary middle high ln**
> age lnstudents urban pctpdfs readlevel14 mathlevel14 || geodistrict: ,

Performing EM optimization:

Performing gradient-based optimization:

```
Iteration 0:   log likelihood =  -56.63605
Iteration 1:   log likelihood = -56.635711
Iteration 2:   log likelihood = -56.635711

Computing standard errors:

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

                                                Wald chi2(12)     =    1234.43
Log likelihood = -56.635711                     Prob > chi2       =     0.0000
```

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
inquiry_full_log	-.2066023	.0275097	-7.51	0.000	-.2605203	-.1526842
readall14	-.4225614	.0249921	-16.91	0.000	-.4715451	-.3735778
mathall14	-.0810968	.0245493	-3.30	0.001	-.1292126	-.032981
primary	.0030508	.0084599	0.36	0.718	-.0135302	.0196318
middle	.0367684	.0126345	2.91	0.004	.0120052	.0615316
high	.0017783	.0101525	0.18	0.861	-.0181202	.0216769
lnage	.0053291	.0035256	1.51	0.131	-.001581	.0122391
lnstudents	.0049632	.0044601	1.11	0.266	-.0037785	.0137049
urban	.062717	.0098087	6.39	0.000	.0434924	.0819416
pctpdfs	.050633	.0699708	0.72	0.469	-.0865073	.1877733
readlevel14	-.0001019	.0008332	-0.12	0.903	-.001735	.0015313
mathlevel14	-.0001463	.0008202	-0.18	0.858	-.0017538	.0014612
_cons	.7149435	.0283277	25.24	0.000	.6594222	.7704648

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity var(_cons)	.0296596	.0019542	.0260664	.0337481
var(Residual)	.0476149	.0010035	.0456881	.049623

LR test vs. linear model: chibar2(01) = **1962.76** Prob >= chibar2 = **0.0000**

```
m=4 data:
-> mixed povertyschoolprop inquiry_full_log readall14 mathall14 primary middle high ln
> age lnstudents urban pctpdfs readlevel14 mathlevel14 || geodistrict: ,

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0:   log likelihood = -74.426064
Iteration 1:   log likelihood = -74.425556
Iteration 2:   log likelihood = -74.425556

Computing standard errors:

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

                                                Wald chi2(12)     =    1249.08
Log likelihood = -74.425556                     Prob > chi2       =     0.0000
```

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
inquiry_full_log	**-.2016746**	**.0276307**	**-7.30**	**0.000**	**-.2558298**	**-.1475194**
readall14	**-.4333092**	**.0250949**	**-17.27**	**0.000**	**-.4824943**	**-.3841242**
mathall14	**-.0693299**	**.0248344**	**-2.79**	**0.005**	**-.1180045**	**-.0206553**
primary	**.0033854**	**.0085049**	**0.40**	**0.691**	**-.0132839**	**.0200546**
middle	**.03195**	**.0126825**	**2.52**	**0.012**	**.0070928**	**.0568071**
high	**.0035558**	**.0101908**	**0.35**	**0.727**	**-.0164178**	**.0235294**
lnage	**.0067086**	**.0035375**	**1.90**	**0.058**	**-.0002249**	**.013642**
lnstudents	**-.0026828**	**.0044497**	**-0.60**	**0.547**	**-.011404**	**.0060384**
urban	**.0647697**	**.009808**	**6.60**	**0.000**	**.0455463**	**.083993**
pctpdfs	**.0597144**	**.0702045**	**0.85**	**0.395**	**-.0778839**	**.1973126**
readlevel14	**-.0008126**	**.0008133**	**-1.00**	**0.318**	**-.0024068**	**.0007815**
mathlevel14	**-.0001825**	**.0007821**	**-0.23**	**0.816**	**-.0017155**	**.0013505**
_cons	**.7618888**	**.0284251**	**26.80**	**0.000**	**.7061766**	**.8176011**

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity var(_cons)	**.0288614**	**.0019318**	**.0253131**	**.0329072**
var(Residual)	**.0481584**	**.0010147**	**.0462102**	**.0501888**

LR test vs. linear model: chibar2(01) = **1923.73** Prob >= chibar2 = **0.0000**

m=5 data:
-> **mixed povertyschoolprop inquiry_full_log readall14 mathall14 primary middle high ln**
> age lnstudents urban pctpdfs readlevel14 mathlevel14 || geodistrict: ,

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log likelihood = **-64.181126**
Iteration 1: log likelihood = **-64.180738**
Iteration 2: log likelihood = **-64.180738**

Computing standard errors:

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**

Wald chi2(**12**) = **1218.60**
Log likelihood = **-64.180738** — Prob > chi2 = **0.0000**

povertyschoolprop	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
inquiry_full_log	**-.1955447**	**.0275708**	**-7.09**	**0.000**	**-.2495825**	**-.1415069**
readall14	**-.4290966**	**.0248602**	**-17.26**	**0.000**	**-.4778217**	**-.3803715**
mathall14	**-.0708359**	**.0242951**	**-2.92**	**0.004**	**-.1184535**	**-.0232183**
primary	**.0040839**	**.0084651**	**0.48**	**0.629**	**-.0125073**	**.0206751**
middle	**.037315**	**.0126245**	**2.96**	**0.003**	**.0125714**	**.0620585**
high	**-.0022557**	**.010175**	**-0.22**	**0.825**	**-.0221983**	**.017687**
lnage	**.007339**	**.0035372**	**2.07**	**0.038**	**.0004062**	**.0142717**
lnstudents	**.0043714**	**.0044036**	**0.99**	**0.321**	**-.0042596**	**.0130024**
urban	**.0650697**	**.009812**	**6.63**	**0.000**	**.0458385**	**.0843008**
pctpdfs	**.0436324**	**.0700643**	**0.62**	**0.533**	**-.0936912**	**.180956**
readlevel14	**-.0002314**	**.0007908**	**-0.29**	**0.770**	**-.0017813**	**.0013184**
mathlevel14	**-.0001166**	**.0007711**	**-0.15**	**0.880**	**-.0016279**	**.0013948**
_cons	**.7118224**	**.0280694**	**25.36**	**0.000**	**.6568074**	**.7668375**

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity var(_cons)	**.0294871**	**.0019529**	**.0258975**	**.0335742**
var(Residual)	**.0478024**	**.0010077**	**.0458676**	**.0498189**

LR test vs. linear model: chibar2(01) = **1955.62** Prob >= chibar2 = **0.0000**

```
37. mi est, dots post: mixed povertyschoolprop inquiry_full_log readall14 mathall14 prim
  > ary middle high lnage lnstudents urban pctpdfs readlevel14 mathlevel14 || geodistric
  > t: ,

  Imputations (100):
    .........10.........20.........30.........40.........50.........60.........70.......
  > ..80.........90.........100 done
```

Multiple-imputation estimates		Imputations	= **100**
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	= **0.1807**
		Largest FMI	= **0.3175**
DF adjustment: **Large sample**		DF: min	= **990.41**
		avg	= **10,032.85**
		max	= **30,923.06**
Model F test: **Equal FMI**		F(**12**,**43548.2**)	= **84.68**
		Prob > F	= **0.0000**

povertyschoolprop	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
inquiry_full_log	**-.2044046**	**.0286166**	**-7.14**	**0.000**	**-.2604955**	**-.1483138**
readall14	**-.429959**	**.030364**	**-14.16**	**0.000**	**-.4895442**	**-.3703739**
mathall14	**-.0678043**	**.0297449**	**-2.28**	**0.023**	**-.1261722**	**-.0094364**
primary	**.0039067**	**.0089728**	**0.44**	**0.663**	**-.0136822**	**.0214955**
middle	**.0367684**	**.0133128**	**2.76**	**0.006**	**.0106729**	**.0628639**
high	**.0023094**	**.0107885**	**0.21**	**0.831**	**-.0188388**	**.0234576**
lnage	**.0077962**	**.0037462**	**2.08**	**0.037**	**.0004527**	**.0151398**
lnstudents	**.0012032**	**.0051053**	**0.24**	**0.814**	**-.0088105**	**.0112169**
urban	**.0645613**	**.0101098**	**6.39**	**0.000**	**.0447457**	**.084377**
pctpdfs	**.0468953**	**.0725557**	**0.65**	**0.518**	**-.0953186**	**.1891091**
readlevel14	**.000124**	**.000938**	**0.13**	**0.895**	**-.001716**	**.001964**
mathlevel14	**-.0006326**	**.0009272**	**-0.68**	**0.495**	**-.0024516**	**.0011863**
_cons	**.7296431**	**.0326716**	**22.33**	**0.000**	**.665558**	**.7937281**

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
geodistrict: Identity sd(_cons)	**.1715283**	**.005855**	**.1604277**	**.183397**
sd(Residual)	**.2189864**	**.0025895**	**.2139668**	**.2241237**

38. est store pov3

39. ereturn list

```
  scalars:
                  e(small) =  0
               e(nrgroups) =  1
                   e(ll_c) =  .
                   e(k_rs) =  2
                      e(N) =  5784
                   e(df_c) =  .
                   e(k_rc) =  0
                     e(rc) =  0
                      e(k) =  15
                  e(k_res) =  0
              e(converged) =  1
              e(se_failed) =  0
                    e(k_r) =  2
                     e(ll) =  .
                 e(mecmd) =  0
                e(chi2_c) =  .
                    e(ic) =  2
               e(nostderr) =  0
                   e(df_m) =  .
                      e(p) =  .
                    e(p_c) =  .
                    e(k_f) =  13
                   e(rank) =  .
                   e(chi2) =  .
            e(_dfnote_mi) =  0
            e(mcerror_mi) =  0
              e(N_min_mi) =  5784
              e(N_max_mi) =  5784
            e(cilevel_mi) =  95
              e(k_exp_mi) =  0
           e(reparm_rc_mi) =  .
          e(k_eq_model_mi) =  3
              e(caller_mi) =  15.1
              e(df_min_mi) =  990.4070992689177
              e(df_avg_mi) =  10032.85236333033
              e(df_max_mi) =  30923.05678889067
            e(fmi_max_mi) =  .317539519082329
            e(rvi_avg_mi) =  .1807142833918364
                  e(p_mi) =  1.9235238799e-207
               e(ufmi_mi) =  0
           e(rvi_avg_F_mi) =  .1971236570377329
                  e(F_mi) =  84.67983958804614
               e(df_m_mi) =  12
               e(df_r_mi) =  43548.15697974019
               e(df_c_mi) =  .
                  e(N_mi) =  5784
                  e(M_mi) =  100
           e(esampvary_mi) =  0

  macros:
                   e(cmd) : "mixed"
             e(rstructure) : "independent"
             e(rstructlab) : "Independent"
                  e(iccok) : "ok"
                  e(redim) : "1"
              e(optmetric) : "matsqrt"
  e(datasignaturevars) : "povertyschoolprop inquiry_full_log readall14 mathall14 prima
> ry.."
               e(vartypes) : "Identity"
                  e(title) : "Mixed-effects ML regression"
              e(stripe_se) : "povertyschoolprop:inquiry_full_log povertyschoolprop:readall
> 14.."
               e(chi2type) : "Wald"
              e(ml_method) : "d0"
                 e(depvar) : "povertyschoolprop"
                   e(opt) : "moptimize"
              e(crittype) : "log likelihood"
```

```
              e(revars) : "_cons"
               e(ivars) : "geodistrict"
              e(method) : "ML"
           e(technique) : "nr"
             e(cmdline) : "mixed povertyschoolprop inquiry_full_log readall14 mathall14
> p.."
        e(names_vvl_mi) : "datasignature"
        e(names_vvs_mi) : "p chi2_c ll ll_c chi2"
        e(names_vvm_mi) : "b_sd se_sd V_sd"
              e(m_mi) : "1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
> 24.."
           e(m_est_mi) : "1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
> 24.."
              e(rc_mi) : "0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
> 0 .."
         e(dfadjust_mi) : "Large sample"
        e(modeltest_mi) : "Equal FMI"
           e(title_mi) : "Multiple-imputation estimates"
          e(prefix_mi) : "mi estimate"
             e(cmd_mi) : "mixed"
            e(ecmd_mi) : "mixed"
                 e(mi) : "mi"
          e(cmdline_mi) : "mi estimate , dots post: mixed povertyschoolprop inquiry_ful
> l_.."
        e(_sortseed_mi) : "1517231209XZA112210f4b16c1cb10507a1f38cb440c40003c9a83566fa1
> 20.."
     e(_sortseedcmd_mi) : "1317694121XZA112210f4b16c1cb10507a1f38cb440c40003c9a83566fa1
> 20.."
           e(properties) : "b V"

  matrices:
                    e(b) :  1 x 15
                    e(V) :  15 x 15
                 e(b_sd) :  1 x 1
               e(noomit) :  1 x 13
             e(b_pclass) :  1 x 15
                e(g_min) :  1 x 1
                e(se_sd) :  1 x 1
                e(g_max) :  1 x 1
                e(g_avg) :  1 x 1
                  e(N_g) :  1 x 1
                 e(V_sd) :  1 x 1
                e(re_mi) :  1 x 15
               e(fmi_mi) :  1 x 15
              e(pise_mi) :  1 x 15
               e(rvi_mi) :  1 x 15
                e(df_mi) :  1 x 15
                 e(W_mi) :  15 x 15
                 e(B_mi) :  15 x 15
                 e(V_mi) :  15 x 15
                 e(b_mi) :  1 x 15
               e(N_g_mi) :  1 x 1
              e(g_min_mi) :  1 x 1
              e(g_avg_mi) :  1 x 1
              e(g_max_mi) :  1 x 1

40. est save "model_estimates/2d_schpov_full_mi100_linear.ster", replace
  file model_estimates/2d_schpov_full_mi100_linear.ster saved

41. outreg2 using "tables/2d_schpov_full_mi100_linear.rtf", replace word label onecol ad
  > dstat(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")
  tables/2d_schpov_full_mi100_linear.rtf
  seeout
```

```
42.
43. log close
       name:  <unnamed>
        log:  /hdir/0/jhaber/Projects/charter_data/sorting-schools-2019/logs/results_2_
  > schpov_mi100_linear_101019.smcl
      log type:  smcl
     closed on:  18 Oct 2019, 13:55:52
-------------------------------------------------------------------------------
```