

[illegible]

inquiry_full_log	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
primary	.0062671	.0041337	1.52	0.129	-.0018349	.0143691
middle	-.0170864	.0061317	-2.79	0.005	-.0291043	-.0050685
high	-.0114716	.0049175	-2.33	0.020	-.0211096	-.0018335
lnage	-.0039903	.001662	-2.40	0.016	-.0072477	-.0007329
lnstudents	.0037493	.0017861	2.10	0.036	.0002486	.0072501
urban	.0018568	.0032068	0.58	0.563	-.0044284	.008142
pctpdfs	.0624994	.0341577	1.83	0.067	-.0044485	.1294473
_cons	.0809048	.0119933	6.75	0.000	.0573984	.1044113

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
cmoname: Identity				
sd(_cons)	.0697723	.0043233	.0617931	.0787818
sd(Residual)	.1042309	.001075	.1021451	.1063594

```
10. * 1. school poverty
11. mi est, dots: mixed inquiry_full_log povertyschool primary middle high lnage lnstudent
> nts urban pctpdfs || cmoname: ,
```

Imputations (5):
..... done

```
Multiple-imputation estimates      Imputations      =      5
Mixed-effects ML regression      Number of obs      =    5,017

Group variable: cmoname          Number of groups   =     357
                                Obs per group:
                                min =      1
                                avg =    14.1
                                max =    3,221
                                Average RVI      =    0.0154
                                Largest FMI       =    0.1384
                                DF: min           =    232.94
                                avg              = 5294841.16
                                max              =    3.74e+07
                                F( 8,62327.0)     =    18.84
                                Prob > F         =    0.0000
```

DF adjustment: **Large sample**

Model F test: **Equal FMI**

inquiry_full_log	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
povertyschool	-.0005203	.000054	-9.64	0.000	-.0006267	-.0004139
primary	.0054567	.0040923	1.33	0.182	-.0025642	.0134775
middle	-.0149627	.0060719	-2.46	0.014	-.0268634	-.0030619
high	-.0116034	.0048688	-2.38	0.017	-.0211461	-.0020607
lnage	-.0038127	.0016464	-2.32	0.021	-.0070396	-.0005858
lnstudents	.0031342	.0017714	1.77	0.077	-.0003377	.006606
urban	.0084959	.0032506	2.61	0.009	.0021247	.0148672
pctpdfs	.0578679	.0338042	1.71	0.087	-.0083872	.124123
_cons	.1125931	.0123316	9.13	0.000	.0884231	.1367632

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
cmoname: Identity				
sd(_cons)	.0702216	.0042944	.0622895	.0791638
sd(Residual)	.1030634	.0010664	.1009943	.1051749

12. * 2. school race
 13. mi est, dots: mixed inquiry_full_log pocschoolprop primary middle high lnage lnstude
 > nts urban pctpdfs || cmoname: ,

Imputations (5):
 done

Multiple-imputation estimates	Imputations	=	5
Mixed-effects ML regression	Number of obs	=	5,017
Group variable: cmoname	Number of groups	=	357
	Obs per group:		
	min	=	1
	avg	=	14.1
	max	=	3,221
	Average RVI	=	0.0000
	Largest FMI	=	0.0000
DF adjustment: Large sample	DF: min	=	7.62e+59
	avg	=	7.62e+59
	max	=	.
Model F test: Equal FMI	F(8, 1.8e+62)	=	21.36
	Prob > F	=	0.0000

inquiry_full_log	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
pocschoolprop	-.0624781	.0056143	-11.13	0.000	-.073482	-.0514743
primary	.0108353	.0041046	2.64	0.008	.0027904	.0188802
middle	-.0092791	.0060984	-1.52	0.128	-.0212318	.0026736
high	-.0061416	.0048817	-1.26	0.208	-.0157095	.0034263
lnage	-.005955	.0016514	-3.61	0.000	-.0091917	-.0027183
lnstudents	.0069698	.001788	3.90	0.000	.0034654	.0104743
urban	.0175067	.0034665	5.05	0.000	.0107125	.024301
pctpdfs	.0637763	.0337517	1.89	0.059	-.0023759	.1299285
_cons	.0992554	.0119544	8.30	0.000	.0758253	.1226855

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
cmoname: Identity				
sd(_cons)	.0684252	.0042684	.0605505	.077324
sd(Residual)	.1029998	.0010624	.1009385	.1051032

14. * 3. school district poverty
 15. mi est, dots: mixed inquiry_full_log povertysd primary middle high lnage lnstudents
 > urban pctpdfs || cmoname: ,

Imputations (5):
 done

Multiple-imputation estimates	Imputations	=	5
Mixed-effects ML regression	Number of obs	=	5,017
Group variable: cmoname	Number of groups	=	357
	Obs per group:		
	min	=	1
	avg	=	14.1
	max	=	3,221
	Average RVI	=	0.0002
	Largest FMI	=	0.0018
DF adjustment: Large sample	DF: min	=	1194656.77
	avg	=	8.77e+10
	max	=	9.10e+11
Model F test: Equal FMI	F(8, 3.8e+08)	=	13.77
	Prob > F	=	0.0000

inquiry_full_log	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
povertysd	-.1819199	.022819	-7.97	0.000	-.2266444	-.1371954
primary	.0060269	.0041078	1.47	0.142	-.0020243	.0140781
middle	-.0174327	.0060931	-2.86	0.004	-.0293749	-.0054905
high	-.0103833	.0048884	-2.12	0.034	-.0199643	-.0008023
lnage	-.003888	.0016515	-2.35	0.019	-.007125	-.0006511
lnstudents	.0042717	.0017761	2.41	0.016	.0007906	.0077528
urban	.0115014	.0034082	3.37	0.001	.0048215	.0181814
pctpdfs	.0637998	.0339366	1.88	0.060	-.0027148	.1303143
_cons	.1007274	.0121817	8.27	0.000	.0768517	.1246032

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
cmoname: Identity				
sd(_cons)	.0697808	.0042914	.061857	.0787197
sd(Residual)	.1035476	.0010678	.1014757	.1056617

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16. * 4. school district race
17. mi est, dots: mixed inquiry_full_log pocsd primary middle high lnage lnstudents urba
> n pctpdfs || cmoname: ,
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Imputations (5):
..... done

Multiple-imputation estimates
Mixed-effects ML regression

Imputations = 5
Number of obs = 5,017

Group variable: **cmoname**

Number of groups = 357
Obs per group:
min = 1
avg = 14.1
max = 3,221

DF adjustment: **Large sample**

Average RVI = 0.0001
Largest FMI = 0.0005
DF: min = 1.42e+07
avg = 1.36e+13
max = 1.48e+14

Model F test: **Equal FMI**

F(8, 4.9e+09) = 6.58
Prob > F = 0.0000

inquiry_full_log	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
pocsd	-.0229686	.0089122	-2.58	0.010	-.0404362	-.005501
primary	.0068801	.0041379	1.66	0.096	-.0012299	.0149902
middle	-.0160988	.0061396	-2.62	0.009	-.0281322	-.0040653
high	-.0110409	.0049171	-2.25	0.025	-.0206782	-.0014036
lnage	-.0043578	.001667	-2.61	0.009	-.007625	-.0010905
lnstudents	.0045611	.0018125	2.52	0.012	.0010087	.0081135
urban	.0052109	.0034589	1.51	0.132	-.0015684	.0119902
pctpdfs	.0620085	.0341357	1.82	0.069	-.0048963	.1289133
_cons	.0830624	.0120145	6.91	0.000	.0595144	.1066104

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
cmoname: Identity				
sd(_cons)	.0697208	.0043232	.0617421	.0787305
sd(Residual)	.1041623	.0010743	.1020778	.1062894

```

18.
19. * PT 2:
20. * 0. controls only
21. mi est, dots: mixed povertyschoolprop primary middle high lnage lnstudents urban ||
> geodistrict: ,

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Imputations (5):
..... done

Multiple-imputation estimates	Imputations	=	5
Mixed-effects ML regression	Number of obs	=	5,017
Group variable: geodistrict	Number of groups	=	1,365
	Obs per group:		
	min	=	1
	avg	=	3.7
	max	=	201
	Average RVI	=	0.0720
	Largest FMI	=	0.2020
DF adjustment: Large sample	DF: min	=	113.18
	avg	=	7,367.84
	max	=	28,301.14
Model F test: Equal FMI	F(6, 2641.6)	=	8.37
	Prob > F	=	0.0000

povertyschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
primary	-.0085926	.0104443	-0.82	0.411	-.0291119	.0119267
middle	.0320555	.0150003	2.14	0.033	.002635	.0614759
high	-.0125204	.0123245	-1.02	0.310	-.0367298	.011689
lnage	.0047457	.0042808	1.11	0.268	-.0036655	.0131569
lnstudents	-.0129211	.0049018	-2.64	0.010	-.0226322	-.00321
urban	.066762	.0114442	5.83	0.000	.0443308	.0891932
_cons	.5541051	.0280217	19.77	0.000	.4990147	.6091955

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
geodistrict: Identity				
sd(_cons)	.1879358	.0067137	.1752268	.2015665
sd(Residual)	.2381804	.0027616	.2328281	.2436557

```

22. * 1. IBL
23. mi est, dots: mixed povertyschoolprop inquiry_full_log primary middle high lnage lns
> tudents urban pctpdfs || geodistrict: ,

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Imputations (5):
..... done

Multiple-imputation estimates	Imputations	=	5
Mixed-effects ML regression	Number of obs	=	5,017
Group variable: geodistrict	Number of groups	=	1,365
	Obs per group:		
	min	=	1
	avg	=	3.7
	max	=	201
	Average RVI	=	0.0834
	Largest FMI	=	0.2021
DF adjustment: Large sample	DF: min	=	113.07
	avg	=	4,385.30
	max	=	21,260.17
Model F test: Equal FMI	F(8, 3164.5)	=	14.80
	Prob > F	=	0.0000

povertyschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
inquiry_full_log	-.284684	.0352265	-8.08	0.000	-.3539664	-.2154017
primary	-.0062693	.0104045	-0.60	0.547	-.0267142	.0141757
middle	.0287305	.0149328	1.92	0.055	-.0005577	.0580186
high	-.0143497	.0122385	-1.17	0.241	-.0383877	.0096884
lnage	.0039919	.0042648	0.94	0.350	-.0043899	.0123737
lnstudents	-.0109167	.0048733	-2.24	0.027	-.0205716	-.0012618
urban	.0689703	.0113262	6.09	0.000	.0467701	.0911704
pctpdfs	-.0046997	.0912324	-0.05	0.959	-.1842813	.1748819
_cons	.5790074	.0280565	20.64	0.000	.523833	.6341819

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
geodistrict: Identity				
sd(_cons)	.1830701	.0066554	.1704789	.1965913
sd(Residual)	.2372011	.0027573	.2318567	.2426686

24. * 2. academic performance
 25. mi est, dots: mixed povertyschoolprop readall14 mathall14 primary middle high lnage
 > lnstudents urban readlevel14 mathlevel14 || geodistrict: ,

Imputations (5):
 done

Multiple-imputation estimates
 Mixed-effects ML regression

Imputations = 5
 Number of obs = 5,017

Group variable: **geodistrict**

Number of groups = 1,365
 Obs per group:
 min = 1
 avg = 3.7
 max = 201

DF adjustment: **Large sample**

Average RVI = 0.2189
 Largest FMI = 0.5098
 DF: min = 18.87
 avg = 3,783.91
 max = 36,258.88

Model F test: **Equal FMI**

F(10, 812.8) = 75.61
 Prob > F = 0.0000

povertyschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
readall14	-.435158	.0300622	-14.48	0.000	-.494935	-.375381
mathall14	-.0630627	.0360614	-1.75	0.097	-.1385763	.0124509
primary	-.0027137	.0097173	-0.28	0.780	-.021805	.0163777
middle	.0365858	.0140054	2.61	0.009	.0091208	.0640507
high	-.0035189	.0122438	-0.29	0.774	-.0277542	.0207163
lnage	.0111349	.0039979	2.79	0.006	.0032733	.0189965
lnstudents	.001798	.0054408	0.33	0.742	-.0090369	.012633
urban	.0610048	.0105852	5.76	0.000	.0402538	.0817558
readlevel14	-.0009533	.0008998	-1.06	0.291	-.002727	.0008203
mathlevel14	.0006294	.0008282	0.76	0.447	-.0009943	.0022532
_cons	.7015887	.0360094	19.48	0.000	.6291338	.7740435

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
geodistrict: Identity				
sd(_cons)	.1692228	.0060186	.1578279	.1814403
sd(Residual)	.2204861	.0027429	.2151331	.2259723

26. * 3. fully specified

27. mi est, dots: mixed povertyschoolprop inquiry_full_log readall14 mathall14 primary m
> iddle high lnage lnstudents urban pctpdfs readlevel14 mathlevel14 || geodistrict: ,

Imputations (5):

..... done

Multiple-imputation estimates
Mixed-effects ML regression

Imputations = 5
Number of obs = 5,017

Group variable: **geodistrict**

Number of groups = 1,365
Obs per group:
min = 1
avg = 3.7
max = 201

DF adjustment: **Large sample**

Average RVI = 0.2105
Largest FMI = 0.5173
DF: min = 18.32
avg = 2,382.31
max = 21,011.13
F(12, 1130.3) = 67.72
Prob > F = 0.0000

povertyschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
inquiry_full_log	-.2082507	.0333623	-6.24	0.000	-.2739897	-.1425117
readall14	-.4149631	.030508	-13.60	0.000	-.4757772	-.3541489
mathall14	-.0762688	.0362562	-2.10	0.049	-.1523461	-.0001914
primary	-.0007316	.0097367	-0.08	0.940	-.0198703	.0184071
middle	.0341267	.0139508	2.45	0.014	.0067716	.0614818
high	-.0048821	.0121645	-0.40	0.689	-.028946	.0191818
lnage	.0103198	.0039961	2.58	0.010	.0024593	.0181802
lnstudents	.0027707	.0054373	0.51	0.612	-.0080646	.0136061
urban	.0631635	.0105037	6.01	0.000	.0425718	.0837552
pctpdfs	-.0111461	.0858365	-0.13	0.897	-.1804884	.1581961
readlevel14	-.0008142	.0008982	-0.91	0.366	-.002585	.0009566
mathlevel14	.0004483	.0008235	0.54	0.586	-.0011662	.0020628
_cons	.7183243	.0358205	20.05	0.000	.6463331	.7903155

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
geodistrict: Identity				
sd(_cons)	.164997	.0059921	.1536603	.1771701
sd(Residual)	.2202356	.0027502	.2148644	.225741

28.

29. * PT 3:

30. * 0. controls only

31. mi est, dots: mixed pocschoolprop primary middle high lnage lnstudents urban || stat
> e: || geodistrict: ,

Imputations (5):

..... done

Multiple-imputation estimates
Mixed-effects ML regression

Imputations = 5
Number of obs = 5,017

Group Variable	No. of Groups	Observations per Group		
		Minimum	Average	Maximum
state	43	2	116.7	892
geodistrict	1,375	1	3.6	201

DF adjustment: **Large sample**

Model F test: **Equal FMI**

Average RVI = 0.0000
 Largest FMI = 0.0000
 DF: min = 3.20e+59
 avg = 9.27e+60
 max = .
 F(6, 1.5e+62) = 35.33
 Prob > F = 0.0000

pocschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
primary	.0484526	.00786	6.16	0.000	.0330472	.063858
middle	.0766479	.0114392	6.70	0.000	.0542276	.0990682
high	.0617786	.0092893	6.65	0.000	.0435718	.0799854
lnage	-.0154529	.0032449	-4.76	0.000	-.0218127	-.009093
lnstudents	.0084846	.0036116	2.35	0.019	.0014059	.0155633
urban	.1073609	.0098021	10.95	0.000	.0881492	.1265726
_cons	.4184438	.0361709	11.57	0.000	.3475502	.4893374

Random-effects Parameters		Estimate	Std. Err.	[95% Conf. Interval]	
state: Identity	sd(_cons)	.1742202	.0229203	.1346217	.2254666
geodistrict: Identity	sd(_cons)	.2028354	.0059769	.1914528	.2148948
	sd(Residual)	.1808184	.0021206	.1767095	.1850227

32. * 1. IBL

33. mi est, dots: mixed pocschoolprop inquiry_full_log primary middle high lnage lnstude
 > nts urban pctpdfs || state: || geodistrict: ,

Imputations (5):
 done

Multiple-imputation estimates Imputations = 5
 Mixed-effects ML regression Number of obs = 5,017

Group Variable	No. of Groups	Observations per Group		
		Minimum	Average	Maximum
state	43	2	116.7	892
geodistrict	1,375	1	3.6	201

DF adjustment: **Large sample**

Model F test: **Equal FMI**

Average RVI = 0.0000
 Largest FMI = 0.0000
 DF: min = 5.52e+56
 avg = 1.76e+59
 max = .
 F(8, .) = 40.83
 Prob > F = 0.0000

pocschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
inquiry_full_log	-.275703	.0262416	-10.51	0.000	-.3271356	-.2242704
primary	.0503067	.0077738	6.47	0.000	.0350703	.065543
middle	.0728778	.0113208	6.44	0.000	.0506895	.0950662
high	.0599458	.0091863	6.53	0.000	.041941	.0779506
lnage	-.01608	.003209	-5.01	0.000	-.0223696	-.0097904
lnstudents	.0103407	.003576	2.89	0.004	.0033318	.0173495
urban	.1100538	.0097037	11.34	0.000	.091035	.1290727
pctpdfs	.0735524	.0675037	1.09	0.276	-.0587524	.2058572
_cons	.4445741	.035804	12.42	0.000	.3743996	.5147485

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
state: Identity sd(_cons)	.1717571	.0226286	.1326695	.222361
geodistrict: Identity sd(_cons)	.2013697	.0059343	.1900682	.2133433
sd(Residual)	.1787142	.0020978	.1746495	.1828734

34. * 2. academic performance

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35. mi est, dots: mixed pcoschoolprop readall14 mathall14 primary middle high lnage linst
> uidents urban readlevel14 mathlevel14 || state: || geodistrict: ,
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Imputations (5):

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..... done

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Multiple-imputation estimates

Mixed-effects ML regression

Imputations

= 5

Number of obs

5,017

Group Variable	No. of Groups	Observations per Minimum	Group Average	Maximum
state	43	2	116.7	892
geodistrict	1,375	1	3.6	201

DF adjustment: **Large sample**

Average RVI = 0.0907

Largest FMI = 0.3351

DF: min = 43.04

$$\text{avg} = 603,289.45$$
$$\max = 6489875.69$$

Model F test: Equal FMI

$$F(10, 2712.1) = 88.90$$

Prob > F	=	0.0000
----------	---	--------

pocschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
readall14	-.3399645	.0228945	-14.85	0.000	-.3851085	-.2948205
mathall14	-.0348728	.0254748	-1.37	0.178	-.0861302	.0163846
primary	.0534469	.0073686	7.25	0.000	.0390047	.067889
middle	.0835645	.0107988	7.74	0.000	.0623993	.1047297
high	.0668738	.0088788	7.53	0.000	.0494706	.0842769
lnage	-.009241	.0030892	-2.99	0.003	-.0152978	-.0031843
lnstudents	.0250727	.0039765	6.31	0.000	.0172761	.0328693
urban	.099181	.0091716	10.81	0.000	.0812049	.1171572
readlevel14	.0007295	.0007972	0.91	0.365	-.0008783	.0023372
mathlevel14	-.000269	.0006993	-0.38	0.701	-.001649	.0011109
_cons	.4907402	.0374698	13.10	0.000	.4172968	.5641835

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
state: Identity sd(_cons)	.1691464	.0218567	.1313021	.2178983
geodistrict: Identity sd(_cons)	.1906364	.0057198	.1797478	.2021846
sd(Residual)	.1681524	.0019882	.1643003	.1720947

36. * 3. fully specified

37. mi est, dots: mixed pocschoolprop inquiry_full_log readall14 mathall14 primary middl
> e high lnage lnstudents urban pctpdfs readlevel14 mathlevel14 || state: || geodistri
> ct: ,

Imputations (5):
..... done

Multiple-imputation estimates Imputations = 5
Mixed-effects ML regression Number of obs = 5,017

Group Variable	No. of Groups	Observations per Group		
		Minimum	Average	Maximum
state	43	2	116.7	892
geodistrict	1,375	1	3.6	201

DF adjustment: **Large sample** Average RVI = 0.0808
 Largest FMI = 0.3461
 DF: min = 40.43
 avg = 1194610.07
 max = 1.57e+07
Model F test: **Equal FMI** F(12, 4493.3) = 81.50
 Prob > F = 0.0000

pocschoolprop	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
inquiry_full_log	-.2043502	.0247724	-8.25	0.000	-.2529032	-.1557972
readall14	-.3190678	.0229202	-13.92	0.000	-.3642703	-.2738654
mathall14	-.0458608	.0253224	-1.81	0.077	-.0968009	.0050793
primary	.0549194	.0073176	7.51	0.000	.0405772	.0692616
middle	.080375	.0107336	7.49	0.000	.0593375	.1014125
high	.0653139	.0088096	7.41	0.000	.0480467	.0825811
lnage	-.0099516	.0030695	-3.24	0.001	-.0159699	-.0039334
lnstudents	.0258047	.0039566	6.52	0.000	.0180466	.0335627
urban	.1014408	.0091153	11.13	0.000	.0835752	.1193065
pctpdfs	.0753766	.0637708	1.18	0.237	-.0496277	.200381
readlevel14	.000805	.0007972	1.01	0.319	-.0008056	.0024156
mathlevel14	-.0003901	.0006947	-0.56	0.575	-.0017609	.0009806
_cons	.5084084	.0372828	13.64	0.000	.4353295	.5814874

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
state: Identity				
sd(_cons)	.1674559	.0216765	.1299316	.2158172
geodistrict: Identity				
sd(_cons)	.1898891	.0056911	.179055	.2013788
sd(Residual)	.1669067	.0019745	.1630813	.1708219

38.

39. log close
 name: <unnamed>
 log: /hdir/0/jhaber/Projects/charter_data/sorting-schools-2019/logs/robust_fil
> tnumpages_mi5_linear_101019.smcl
 log type: smcl
 closed on: 18 Oct 2019, 12:11:08