

**Supplemental Analytic Sample  
Equivalence Tables for Student  
Characteristics and Achievement  
in 22 KIPP Middle Schools: A  
Report from the National  
Evaluation of KIPP Middle Schools**

July 2010

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## SUPPLEMENTAL ANALYTIC SAMPLE EQUIVALENCE TABLES<sup>1</sup>

*July 2010*

In this set of four supplemental tables, we compare the baseline test scores of the treatment and matched control group samples observed in each year after KIPP entry (outcome years 1 to 4). As discussed in Chapter III, we used an iterative propensity score estimation procedure to calculate each student's probability of entering KIPP in fifth or sixth grade, and then applied nearest-neighbor matching (without replacement) to identify a matched comparison group of students similar to KIPP students in terms of observed demographic characteristics and prior achievement at baseline. In that chapter, we also showed that the mean baseline math and reading scores of KIPP students in each of the 22 schools are not significantly different from their matched comparison students at the five percent level (see Table III.1).

The matching process included all fifth and sixth grade student cohorts with at least one year of outcome data. The analytic sample size decreases in subsequent outcome years for two main reasons: first, more recent student cohorts had fewer years of available outcome data than earlier cohorts, so fewer cohorts are included. Second, within a given cohort, we also observe sample attrition at the student level as students transfer out of the jurisdiction or otherwise drop out of the dataset. As a result, impact estimates beyond the first year after KIPP entry did not include all of the treatment and matched comparison students measured in Table III.1. To investigate whether the treatment and control groups maintain baseline equivalence in all four years, the following tables expand on Table III.1 by repeating the comparison of baseline test scores for the portion of the initial sample that was included in each year's impact estimate. The tables also include treatment and control sample sizes for each school and year.

For each matched sample used for the four estimate years, the tables show that the mean baseline math and reading scores of KIPP students, in all 22 schools, are not significantly different from the scores of matched comparison students at the five percent level. While sample sizes decline in each successive year after KIPP entry, the baseline achievement of treatment and matched comparison students remain similar for all four impact estimate years included in the study's benchmark results.

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<sup>1</sup> These tables provide additional supplementary materials for the following report: Tuttle, Christina Clark, Bing-ru Teh, Ira Nichols-Barrer, Brian Gill, and Philip Gleason. "Student Characteristics and Achievement in 22 KIPP Middle Schools." Washington, DC: Mathematica Policy Research, June 2010 < [http://www.mathematica-mpr.com/publications/pdfs/education/KIPP\\_fnlprt.pdf](http://www.mathematica-mpr.com/publications/pdfs/education/KIPP_fnlprt.pdf) >.

**Table S.1. Balance Between KIPP Students and Matched Comparison Students in Year One**

School	Baseline Reading Score		Baseline Math Score		Sample Size	
	<i>KIPP</i> (1)	<i>Comparison</i> (2)	<i>KIPP</i> (3)	<i>Comparison</i> (4)	<i>KIPP</i> (5)	<i>Comparison</i> (6)
School A	-.62 (.04)	-.69 (.04)	-.70 (.04)	-.81 (.04)	349	339
School B	-.42 (.04)	-.41 (.05)	-.39 (.04)	-.35 (.04)	379	356
School C	-.41 (.04)	-.45 (.04)	-.45 (.04)	-.46 (.04)	365	368
School D	-.40 (.09)	-.35 (.10)	-.52 (.08)	-.49 (.08)	122	113
School E	-.32 (.08)	-.41 (.08)	-.51 (.07)	-.58 (.08)	150	149
School F	-.25 (.06)	-.18 (.05)	-.19 (.05)	-.14 (.05)	235	225
School G	-.17 (.08)	-.13 (.09)	-.24 (.08)	-.22 (.08)	101	119
School H	-.17 (.05)	-.15 (.05)	-.09 (.05)	-.11 (.05)	198	197
School I	-.09 (.04)	-.11 (.04)	-.14 (.04)	-.12 (.04)	263	277
School J	-.09 (.04)	-.10 (.04)	-.05 (.04)	-.07 (.04)	337	339
School K	-.08 (.04)	-.11 (.04)	-.08 (.04)	-.13 (.05)	364	365
School L	-.01 (.05)	.02 (.05)	.07 (.04)	.16 (.04)	279	286
School M	.00 (.07)	.06 (.07)	.02 (.07)	.07 (.06)	158	171
School N	.01 (.05)	.00 (.05)	-.01 (.05)	.00 (.04)	340	329
School O	.03 (.06)	-.01 (.06)	-.11 (.06)	-.15 (.06)	198	208
School P	.06 (.06)	.04 (.06)	.10 (.05)	.10 (.06)	223	225
School Q	.07 (.05)	-.02 (.05)	-.05 (.06)	-.09 (.06)	232	210
School R	.14 (.04)	.20 (.04)	.30 (.04)	.31 (.05)	398	385
School S	.19 (.05)	.21 (.05)	.19 (.05)	.25 (.05)	244	257
School T	.21 (.07)	.22 (.07)	.02 (.07)	.00 (.07)	155	152
School U	.21 (.05)	.17 (.05)	.19 (.05)	.14 (.05)	249	283
School V	.29 (.05)	.25 (.05)	.24 (.05)	.31 (.05)	275	275

Note: Standard errors reported in parentheses.

\* Statistically significant at the five percent level

\*\* Statistically significant at the one percent level

**Table S.2. Balance Between KIPP Students and Matched Comparison Students in Year Two**

School	Baseline Reading Score		Baseline Math Score		Sample Size	
	<i>KIPP</i> (1)	<i>Comparison</i> (2)	<i>KIPP</i> (3)	<i>Comparison</i> (4)	<i>KIPP</i> (5)	<i>Comparison</i> (6)
School A	-.63 (.05)	-.65 (.05)	-.71 (.05)	-.76 (.05)	256	223
School E	-.45 (.10)	-.50 (.10)	-.53 (.09)	-.68 (.11)	98	93
School C	-.40 (.04)	-.43 (.04)	-.45 (.05)	-.43 (.05)	282	272
School B	-.39 (.06)	-.39 (.06)	-.37 (.05)	-.30 (.05)	268	234
School D	-.38 (.09)	-.28 (.10)	-.51 (.08)	-.45 (.08)	101	98
School G	-.29 (.11)	-.17 (.11)	-.37 (.10)	-.26 (.09)	76	94
School F	-.26 (.07)	-.18 (.06)	-.23 (.06)	-.16 (.06)	204	190
School H	-.19 (.06)	-.17 (.05)	-.04 (.06)	-.11 (.06)	137	136
School O	-.11 (.09)	-.13 (.09)	-.13 (.08)	-.35 (.09)	101	106
School I	-.08 (.06)	-.16 (.06)	-.10 (.05)	-.14 (.05)	170	184
School J	-.07 (.04)	-.11 (.04)	-.01 (.04)	-.05 (.04)	278	261
School M	-.04 (.10)	.03 (.09)	.06 (.10)	.07 (.08)	92	105
School K	-.04 (.05)	-.06 (.05)	-.08 (.05)	-.07 (.05)	263	265
School L	.00 (.06)	.05 (.05)	.11 (.05)	.16 (.04)	209	229
School N	.00 (.05)	.02 (.05)	-.05 (.05)	.04 (.05)	260	248
School Q	.05 (.06)	-.03 (.07)	-.01 (.06)	-.05 (.08)	163	137
School P	.13 (.06)	.12 (.07)	.10 (.05)	.10 (.06)	155	159
School T	.14 (.08)	.15 (.09)	-.06 (.09)	-.09 (.10)	106	100
School U	.16 (.06)	.15 (.07)	.19 (.06)	.12 (.06)	193	153
School R	.23 (.05)	.22 (.06)	.36 (.05)	.24 (.06)	296	236
School S	.25 (.04)	.27 (.05)	.26 (.05)	.33 (.05)	192	196
School V	.26 (.06)	.19 (.07)	.25 (.06)	.31 (.06)	204	196

Note: Standard errors reported in parentheses.

\* Statistically significant at the five percent level

\*\* Statistically significant at the one percent level

**Table S.3. Balance Between KIPP Students and Matched Comparison Students in Year Three**

School	Baseline Reading Score		Baseline Math Score		Sample Size	
	<i>KIPP</i> (1)	<i>Comparison</i> (2)	<i>KIPP</i> (3)	<i>Comparison</i> (4)	<i>KIPP</i> (5)	<i>Comparison</i> (6)
School A	-.67 (.05)	-.65 (.05)	-.76 (.05)	-.73 (.06)	179	162
School C	-.42 (.06)	-.42 (.05)	-.47 (.06)	-.42 (.05)	190	191
School E	-.42 (.16)	-.46 (.15)	-.39 (.18)	-.55 (.15)	35	40
School B	-.40 (.07)	-.36 (.07)	-.33 (.06)	-.27 (.07)	179	159
School D	-.35 (.09)	-.28 (.10)	-.59 (.08)	-.47 (.08)	105	93
School F	-.31 (.09)	-.19 (.08)	-.28 (.08)	-.17 (.08)	129	125
School G	-.24 (.12)	-.19 (.13)	-.41 (.11)	-.28 (.10)	70	75
School H	-.12 (.06)	-.13 (.07)	.06 (.08)	-.04 (.08)	73	72
School I	-.09 (.07)	-.13 (.06)	-.05 (.06)	-.16 (.06)	106	131
School O	-.04 (.12)	-.16 (.14)	-.06 (.10)	-.34 (.13)	64	46
School L	-.04 (.07)	.00 (.06)	.08 (.06)	.10 (.06)	140	160
School K	-.03 (.06)	-.04 (.06)	-.05 (.06)	-.02 (.06)	182	183
School J	-.03 (.05)	-.06 (.05)	-.01 (.05)	-.03 (.05)	209	198
School M	.07 (.12)	.23 (.09)	.22 (.12)	.27 (.08)	50	61
School U	.08 (.08)	.16 (.08)	.10 (.07)	.19 (.09)	123	101
School N	.10 (.06)	.08 (.06)	.00 (.06)	.04 (.06)	183	185
School Q	.10 (.07)	-.02 (.09)	.03 (.08)	-.02 (.09)	84	81
School P	.14 (.07)	.13 (.08)	.11 (.07)	.08 (.08)	111	106
School R	.22 (.06)	.17 (.07)	.38 (.06)	.24 (.07)	210	205
School S	.26 (.05)	.28 (.06)	.24 (.07)	.25 (.07)	133	141
School V	.27 (.07)	.17 (.08)	.23 (.07)	.30 (.07)	142	133
School T	.27 (.11)	.21 (.13)	.00 (.12)	-.02 (.15)	48	46

Note: Standard errors reported in parentheses.

\* Statistically significant at the five percent level

\*\* Statistically significant at the one percent level

**Table S.4. Balance Between KIPP Students and Matched Comparison Students in Year Four**

School	Baseline Reading Score		Baseline Math Score		Sample Size	
	<i>KIPP</i> (1)	<i>Comparison</i> (2)	<i>KIPP</i> (3)	<i>Comparison</i> (4)	<i>KIPP</i> (5)	<i>Comparison</i> (6)
School A	-.72 (.07)	-.65 (.07)	-.77 (.08)	-.76 (.09)	105	91
School B	-.63 (.09)	-.42 (.09)	-.54 (.09)	-.28 (.10)	88	75
School C	-.47 (.07)	-.40 (.08)	-.58 (.07)	-.39 (.08)	103	103
School F	-.34 (.14)	-.21 (.13)	-.25 (.12)	-.14 (.12)	59	49
School I	-.29 (.14)	-.34 (.15)	-.31 (.15)	-.36 (.12)	33	38
School D	-.27 (.11)	-.28 (.11)	-.37 (.10)	-.44 (.09)	42	51
School L	-.24 (.09)	-.10 (.09)	-.03 (.08)	.05 (.08)	75	75
School G	-.19 (.15)	-.18 (.16)	-.36 (.16)	-.30 (.15)	36	36
School K	-.09 (.08)	-.03 (.08)	-.08 (.08)	-.07 (.09)	114	114
School J	-.07 (.06)	-.15 (.06)	-.01 (.06)	-.05 (.06)	125	113
School N	.00 (.09)	.06 (.08)	-.06 (.08)	.06 (.08)	94	91
School U	.11 (.13)	.17 (.12)	.04 (.11)	.17 (.11)	46	42
School M	.12 (.14)	.20 (.09)	.22 (.17)	.22 (.10)	36	47
School S	.17 (.06)	.14 (.06)	.14 (.07)	.10 (.07)	79	81
School R	.19 (.08)	.13 (.09)	.30 (.09)	.19 (.09)	132	130
School P	.19 (.09)	.00 (.12)	.09 (.08)	.08 (.12)	46	49
School V	.22 (.10)	.13 (.10)	.17 (.08)	.21 (.08)	90	88
School E	N/A	N/A	N/A	N/A	N/A	N/A
School H	N/A	N/A	N/A	N/A	N/A	N/A
School O	N/A	N/A	N/A	N/A	N/A	N/A
School Q	N/A	N/A	N/A	N/A	N/A	N/A
School T	N/A	N/A	N/A	N/A	N/A	N/A

Note: Standard errors reported in parentheses.

\* Statistically significant at the five percent level

\*\* Statistically significant at the one percent level

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