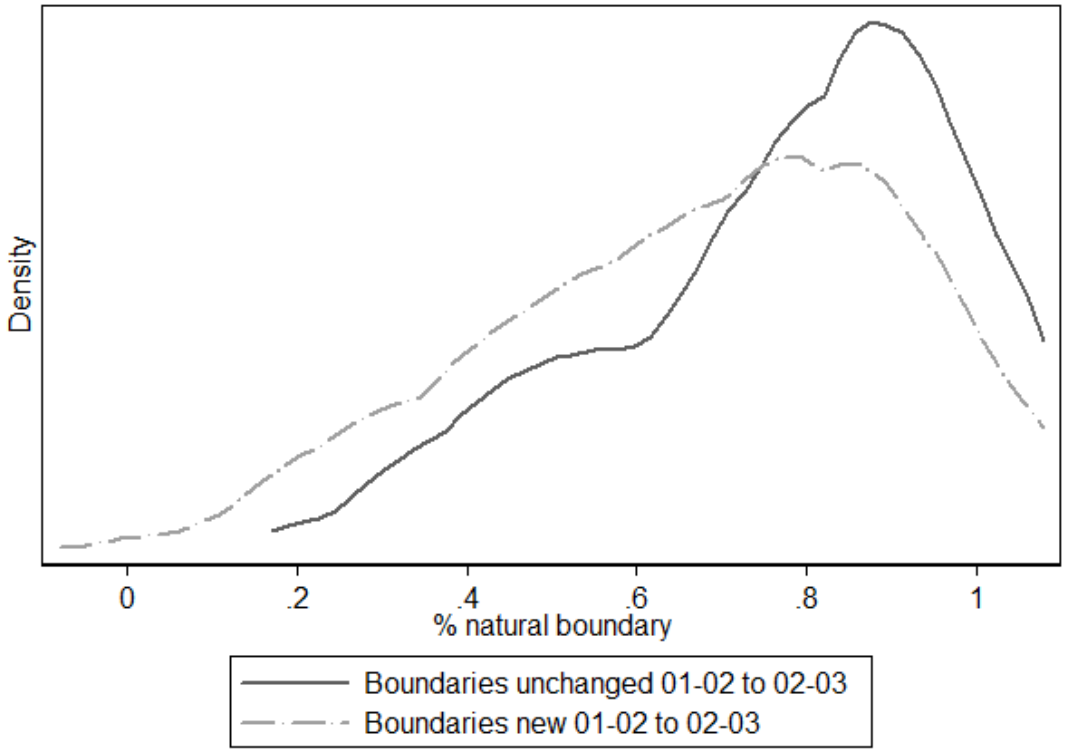
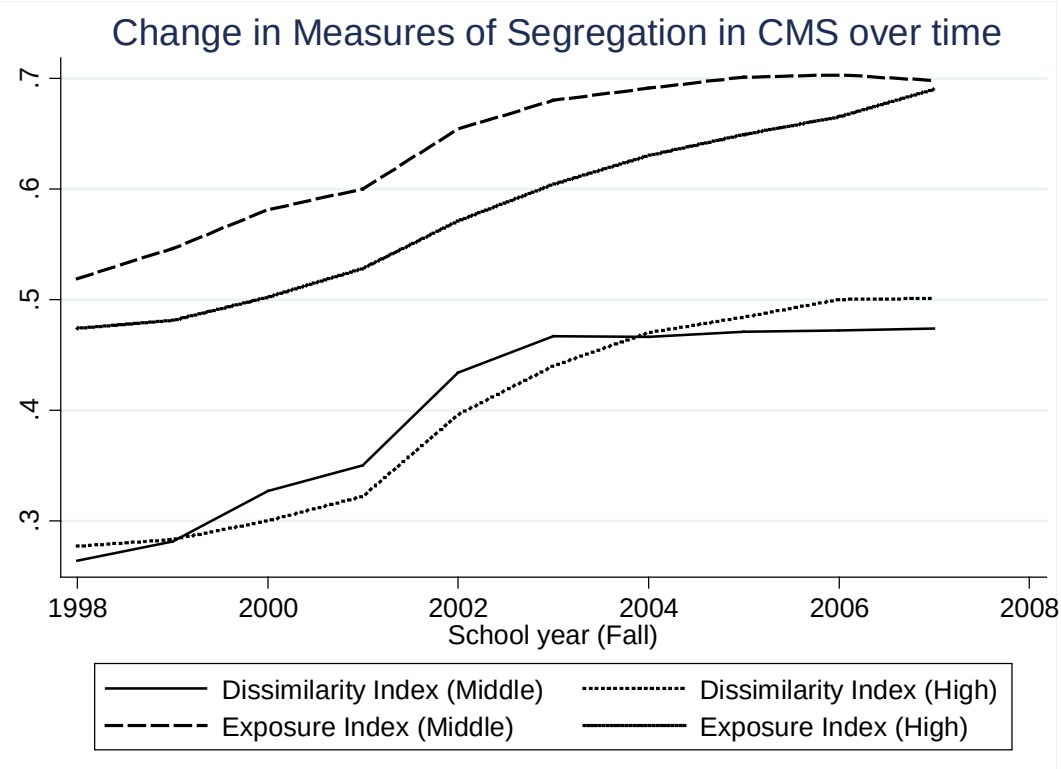
Data Appendix

Figure A1 – Share of boundaries that are coterminous with natural features



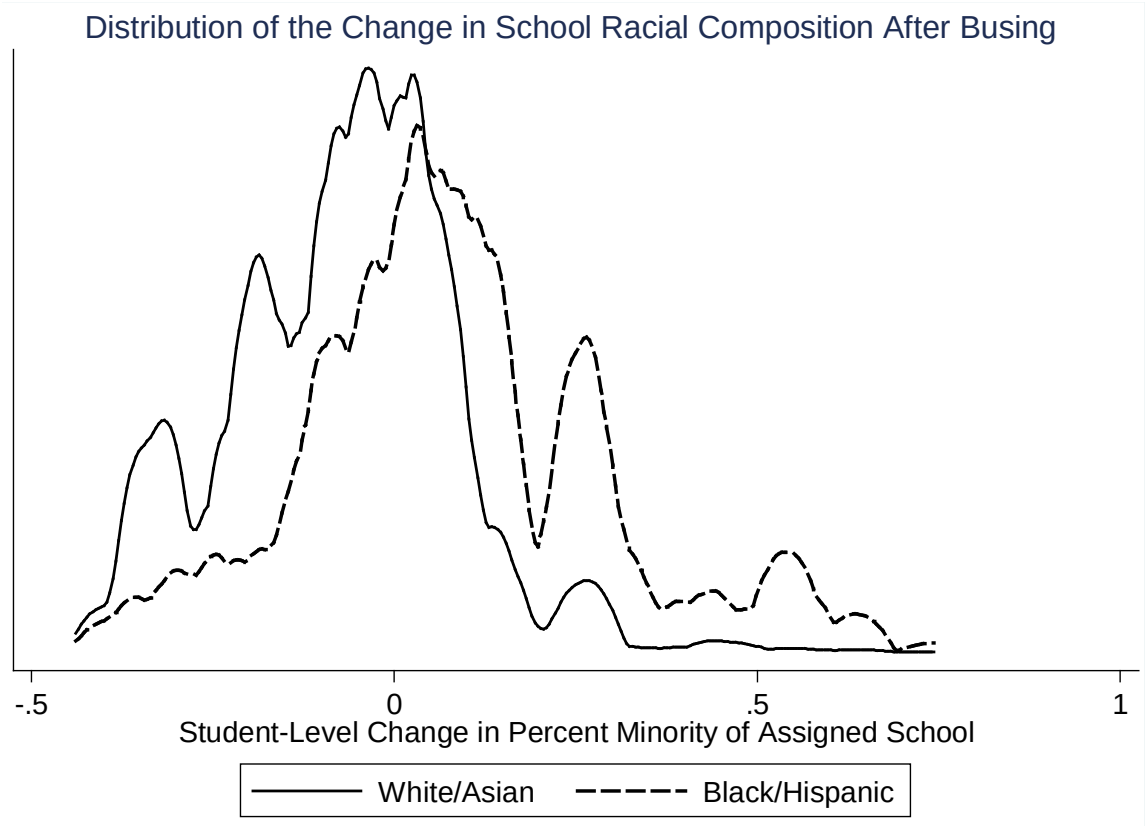
Notes: This figure provides the portion of a unique boundary between two attendance zones (HS or middle) that is coterminous with a natural feature (major road, stream or railroad track) for boundaries that changed under re-segregation relative to those boundaries that were unchanged. Results are weighted by the length of the boundary and we exclude boundaries that define Mecklenburg County. Unchanged boundaries - mean= .828, New boundary - mean= .730, Kolmogorov-Smirnov test for equality of distributions - p=0.017.

Figure A2



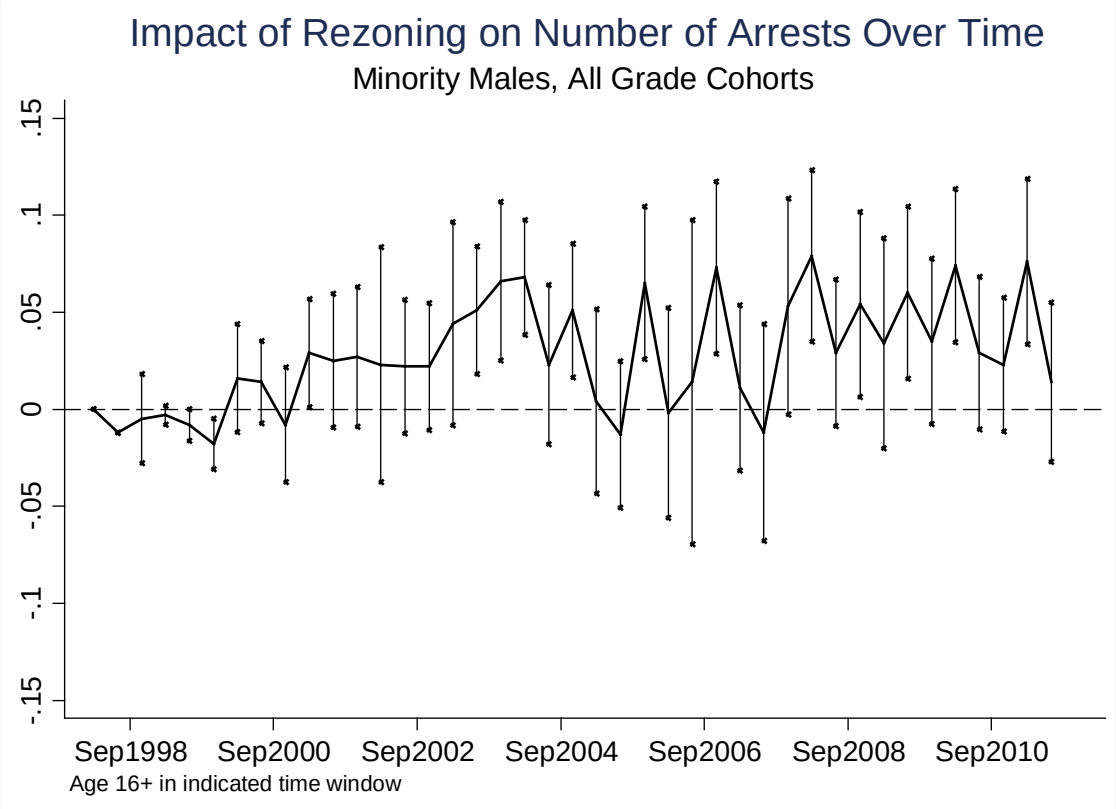
Notes: This figure shows measures of the dissimilarity and exposure indices for CMS middle schools and high schools, from 1998 to 2007. The measures are calculated using CMS administrative data. We divide students into two racial groups – "minorities", which includes black and Latino students, and "non-minorities", which includes white, Asian and all other ethnicities.

Figure A3



Notes: This figure plots the student-level change in the racial composition of the assigned school before and after the re-zoning, separately by race. The mean values for Percent Minority are -0.07 for non-minorities and +0.08 for minorities, with standard deviations of 0.15 and 0.21 respectively.

Figure A4



Notes: Each point is the key coefficient and associated 95 percent confidence interval from a regression like equation (1) on the full sample of age-eligible students, estimated separately for four-month intervals. The coefficients are interpreted as the impact of a 100 percentage point increase in the share minority of a student's assigned school on the number of arrests for minority males in the indicated time period.

Table A1: Main Results using 2001 address

Panel A: High School Cohorts	HS Grad	Attend 4 Year College	Ever Arrested	Ever Incarcerated
	(1)	(2)	(3)	(4)
Avg. Math Scores in New School Zone *				
Non-Minority Female	-0.118***	-0.162***	-0.004	0.005
	[0.041]	[0.039]	[0.018]	[0.016]
Non-Minority Male	-0.122***	-0.148***	0.006	0.017
	[0.043]	[0.039]	[0.021]	[0.020]
Minority Female	0.000	-0.066*	-0.004	0.013
	[0.041]	[0.037]	[0.023]	[0.021]
Minority Male	-0.068*	-0.041	0.129***	0.107***
	[0.039]	[0.030]	[0.036]	[0.035]
Observations	22,329	22,329	22,329	22,329
Panel B: Middle School Cohorts				
Avg. Math Scores in New School Zone *				
Non-Minority Female	-0.063	-0.151***	-0.007	0.001
	[0.042]	[0.039]	[0.018]	[0.015]
Non-Minority Male	0.009	-0.052	0.023	0.015
	[0.045]	[0.036]	[0.023]	[0.021]
Minority Female	0.112***	0.005	0.004	-0.003
	[0.035]	[0.028]	[0.023]	[0.021]
Minority Male	0.027	0.035	0.103***	0.098***
	[0.034]	[0.026]	[0.029]	[0.026]
Observations	21,620	21,620	21,620	21,620

Notes: Within panels, each column shows coefficients and standard errors from a separate estimate of equation (1), and is interpreted as the impact of being assigned to a school with 100 percentage points more minority students, where the impact is allowed to vary by the race and gender combinations indicated in each row. Panel A presents results for rising 9th through 12th graders in the Fall of 2002, while Panel B presents results for rising 6th through 8th graders. All regressions control for race by cohort fixed effects, parcel group by prior middle and high school zone fixed effects, and quadratics in 5th grade math and reading scores plus dummies for missing scores. College attendance records are obtained from the NSC data, which can track students who leave CMS schools. Criminal records are obtained from the Mecklenburg County Sheriff, and can track students who leave CMS schools. We define "minority" as black and Latino students, and "non-minority" as all other ethnicities (including whites). Standard errors are clustered at the prior zone and new zone by parcel group levels, using the multiway clustering procedure of Cameron, Gelbach and Miller (2011).
*** p<0.01, ** p<0.05, * p<0.10

Table A2: Main Results using address in 5th grade

Panel A: High School Cohorts	HS Grad	Attend 4 Year College	Ever Arrested	Ever Incarcerated
	(1)	(2)	(3)	(4)
Avg. Math Scores in New School Zone *				
Non-Minority Female	-0.142**	-0.120**	-0.014	-0.001
	[0.055]	[0.051]	[0.029]	[0.027]
Non-Minority Male	-0.158***	-0.107**	0.021	0.035
	[0.058]	[0.048]	[0.033]	[0.031]
Minority Female	-0.021	-0.029	-0.005	-0.008
	[0.053]	[0.046]	[0.034]	[0.032]
Minority Male	-0.069	-0.039	0.147***	0.101**
	[0.057]	[0.043]	[0.043]	[0.041]
Observations	15,718	15,718	15,718	15,718
Panel B: Middle School Cohorts				
Avg. Math Scores in New School Zone *				
Non-Minority Female	-0.039	-0.131***	-0.012	-0.004
	[0.043]	[0.040]	[0.018]	[0.016]
Non-Minority Male	0.022	-0.040	0.027	0.018
	[0.046]	[0.036]	[0.024]	[0.022]
Minority Female	0.094***	-0.000	0.023	0.009
	[0.035]	[0.028]	[0.022]	[0.021]
Minority Male	0.041	0.039	0.109***	0.096***
	[0.036]	[0.028]	[0.029]	[0.028]
Observations	20,312	20,312	20,312	20,312

Notes: Within panels, each column shows coefficients and standard errors from a separate estimate of equation (1), and is interpreted as the impact of being assigned to a school with 100 percentage points more minority students, where the impact is allowed to vary by the race and gender combinations indicated in each row. Panel A presents results for rising 9th through 12th graders in the Fall of 2002, while Panel B presents results for rising 6th through 8th graders. All regressions control for race by cohort fixed effects, parcel group by prior middle and high school zone fixed effects, and quadratics in 5th grade math and reading scores plus dummies for missing scores. College attendance records are obtained from the NSC data, which can track students who leave CMS schools. Criminal records are obtained from the Mecklenburg County Sheriff, and can track students who leave CMS schools. We define "minority" as black and Latino students, and "non-minority" as all other ethnicities (including whites). Standard errors are clustered at the prior zone and new zone by parcel group levels, using the multiway clustering procedure of Cameron, Gelbach and Miller (2011). *** p<0.01, ** p<0.05, * p<0.10

Table A3: Does Rezoning Predict Student Characteristics?

	Full Sample	High School Cohorts	Middle School Cohorts
	(1)	(2)	(3)
Black	-0.0026	-0.0015	0.0011
	[0.0020]	[0.0017]	[0.0022]
Hispanic	0.0015	0.0041	0.0024
	[0.0046]	[0.0029]	[0.0052]
Free/Reduced Lunch	-0.0007	0.0004	0.0011
	[0.0019]	[0.0012]	[0.0023]
5th Grade Math Score	-0.0006	-0.0000	0.0001
	[0.0009]	[0.0006]	[0.0007]
5th Grade Reading Score	0.0004	-0.0006	-0.0002
	[0.0009]	[0.0006]	[0.0007]
5th Grade Days Absent	-0.0001	-0.0001	0.0001
	[0.0009]	[0.0006]	[0.0001]
5th Grade Days Suspended	0.0008	0.0001	0.0002
	[0.0006]	[0.0004]	[0.0003]
Cohort Fixed Effects	√	√	√
Prior Zone by Parcel Group Fixed Effects	√	√	√
F(All Covs = 0)	0.754	0.312	0.586
Sample Size	51,020	28,465	22,555

Notes: Each column presents results from a regression of the key independent variable in equation (1) - the percent of minority students in a student's assigned school - on the variables listed in each row. The second to last row gives the p-value on an F-test for the joint hypothesis that all the coefficients in each column are equal to zero. Standard errors are clustered at the prior zone and new zone by parcel group levels, using the multiway clustering procedure of Cameron, Gelbach and Miller (2011). *** p<0.01, ** p<0.05, * p<0.10

Table A4: Impact of Re-zoning on Short-Run Attrition from CMS

Panel A: Pooled Sample	Full Sample		High School Cohorts		Middle School Cohorts	
	(1)	(2)	(3)	(4)	(5)	(6)
Share Minority in New Zone	0.013	0.022**	-0.035	0.029	0.064*	0.033
	[0.018]	[0.010]	[0.066]	[0.031]	[0.034]	[0.023]
Panel B: Effects by Racial Group						
Share Minority in New Zone *						
Non-Minority Student	-0.011	0.009	-0.083	0.011	0.042	0.021
	[0.025]	[0.015]	[0.070]	[0.033]	[0.037]	[0.026]
Minority Student	0.029	0.031**	-0.001	0.040	0.080**	0.042*
	[0.019]	[0.011]	[0.069]	[0.032]	[0.035]	[0.024]
Prior Zone by Parcel Group Fixed Effects	√	√	√	√	√	√
Limit to Students Enrolled in 2001-2002		√		√		√
Sample Size	51,020	43,949	28,465	22,329	22,555	21,620

Notes: In Panel A, each cell shows the coefficient and standard error from a separate estimate of equation (1), and is interpreted as the impact of being assigned to a school with 100 percentage points more minority students. Panel B presents results where the impact is allowed to vary by student's own race. Each column shows the results of a separate regression where the dependent variable is an indicator for enrollment in CMS on the 20th day of school in fall 2002; all regressions also control for race by cohort fixed effects, parcel group by prior middle and high school zone fixed effects, and quadratics in 5th grade math and reading scores plus dummies for missing scores. Standard errors are clustered at the Prior Zone by Parcel Group level. *** p<0.01, ** p<0.05, * p<0.10

Table A5: Sensitivity of High School Test Score Results

Panel A: Pooled Sample	Average of 4 HS Tests		
	Pooled	HS Cohorts	MS Cohorts
	(1)	(2)	(3)
Share Free Lunch in New School Zone	-0.149**	-0.221*	-0.085
	[0.059]	[0.120]	[0.086]
Avg. Math Scores in New School Zone	0.090**	0.089	0.075
	[0.040]	[0.075]	[0.058]
Panel B: Effects by Racial Group			
Share Free Lunch in New School Zone *			
Non-Minority Student	0.022	-0.127	-0.020
	[0.053]	[0.144]	[0.096]
Minority Student	0.027	-0.091	0.006
	[0.054]	[0.114]	[0.089]
Avg. Math Scores in New School Zone *			
Non-Minority Student	-0.096***	0.038	-0.106**
	[0.034]	[0.087]	[0.053]
Minority Student	-0.061*	0.019	-0.086
	[0.036]	[0.068]	[0.054]
Observations	31,675	13,340	18,335

Notes: In Panel A, each cell shows the coefficient and standard error from a separate estimate of equation (1), and is interpreted as the impact of being assigned to a school with 100 percentage points more free lunch eligible students, or a 1 SD increase in peer prior math scores, as shown in the indicated row. Panel B presents results where the impact is allowed to vary by student's own race. All regressions also control for race by cohort fixed effects, parcel group by prior middle and high school zone fixed effects, and quadratics in 5th grade math and reading scores plus dummies for missing scores. Columns 1 through 3 construct averages across all non-missing scores. We define "minority" as black and Latino students, and "non-minority" as all other ethnicities (including whites). Standard errors are clustered at the prior zone and new zone by parcel group levels, using the multiway clustering procedure of Cameron, Gelbach and Miller (2011). *** p<0.01, ** p<0.05, * p<0.10

Table A6: Main Results with Share Free Lunch

Panel A: High School Cohorts	HS Grad	Attend 4 Year College	Ever Arrested	Ever Incarcerated
	(1)	(2)	(3)	(4)
Share Free Lunch in New School Zone *				
Non-Minority Female	-0.166**	-0.194**	0.001	0.006
	[0.071]	[0.079]	[0.043]	[0.041]
Non-Minority Male	-0.194***	-0.186**	0.018	0.024
	[0.074]	[0.078]	[0.044]	[0.042]
Minority Female	0.028	-0.065	-0.013	-0.014
	[0.078]	[0.068]	[0.041]	[0.040]
Minority Male	-0.029	-0.025	0.125**	0.088*
	[0.082]	[0.075]	[0.050]	[0.048]
Observations	22,329	22,329	22,329	22,329
Panel B: Middle School Cohorts				
Share Free Lunch in New School Zone *				
Non-Minority Female	-0.205***	-0.123*	-0.007	-0.010
	[0.070]	[0.069]	[0.051]	[0.051]
Non-Minority Male	-0.144*	-0.049	0.019	0.010
	[0.073]	[0.067]	[0.056]	[0.056]
Minority Female	-0.021	-0.001	0.009	0.006
	[0.069]	[0.059]	[0.055]	[0.055]
Minority Male	-0.080	0.034	0.121*	0.124*
	[0.070]	[0.066]	[0.065]	[0.065]
Observations	21,620	21,620	21,620	21,620

Notes: Within panels, each column shows coefficients and standard errors from a separate estimate of equation (1), is interpreted as the impact of being assigned to a school with 100 percentage points more free lunch eligible students, where the impact is allowed to vary by the race and gender combinations indicated in each row. Panel A presents results for rising 9th through 12th graders in the Fall of 2002, while Panel B presents results for rising 6th through 8th graders. All regressions control for race by cohort fixed effects, parcel group by prior middle and high school zone fixed effects, and quadratics in 5th grade math and reading scores plus dummies for missing scores. Criminal records are obtained from the Mecklenburg County Sheriff, and can track students who leave CMS schools. College attendance records are obtained from the NSC data, which can track students who leave CMS schools. We define "minority" as black and Latino students, and "non-minority" as all other ethnicities (including whites). Standard errors are clustered at the prior zone and new zone by parcel group levels, using the multiway clustering procedure of Cameron, Gelbach and Miller (2011).
*** p<0.01, ** p<0.05, * p<0.10

Table A7: Main Results with Average 5th Grade Math Scores

Panel A: High School Cohorts	HS Grad	Attend 4 Year College	Ever Arrested	Ever Incarcerated
	(1)	(2)	(3)	(4)
Avg. Math Scores in New School Zone *				
Non-Minority Female	0.069	0.068	0.018	0.007
	[0.045]	[0.043]	[0.025]	[0.024]
Non-Minority Male	0.094**	0.065	-0.001	-0.012
	[0.046]	[0.041]	[0.026]	[0.024]
Minority Female	-0.041	-0.021	0.018	0.013
	[0.050]	[0.037]	[0.026]	[0.025]
Minority Male	-0.009	-0.058	-0.080**	-0.058*
	[0.050]	[0.040]	[0.031]	[0.032]
Observations	22,329	22,329	22,329	22,329
Panel B: Middle School Cohorts				
Avg. Math Scores in New School Zone *				
Non-Minority Female	0.091**	0.030	0.003	0.001
	[0.040]	[0.039]	[0.024]	[0.024]
Non-Minority Male	0.056	-0.028	-0.015	-0.014
	[0.041]	[0.039]	[0.026]	[0.026]
Minority Female	-0.040	-0.072**	-0.009	-0.009
	[0.044]	[0.034]	[0.029]	[0.029]
Minority Male	0.009	-0.084**	-0.090**	-0.093***
	[0.044]	[0.040]	[0.035]	[0.036]
Observations	21,620	21,620	21,620	21,620

Notes: Within panels, each column shows coefficients and standard errors from a separate estimate of equation (1), is interpreted as the impact of being assigned to a school with 100 percentage points more free lunch eligible students, where the impact is allowed to vary by the race and gender combinations indicated in each row. Panel A presents results for rising 9th through 12th graders in the Fall of 2002, while Panel B presents results for rising 6th through 8th graders. All regressions control for race by cohort fixed effects, parcel group by prior middle and high school zone fixed effects, and quadratics in 5th grade math and reading scores plus dummies for missing scores. Criminal records are obtained from the Mecklenburg County Sheriff, and can track students who leave CMS schools. College attendance records are obtained from the NSC data, which can track students who leave CMS schools. We define "minority" as black and Latino students, and "non-minority" as all other ethnicities (including whites). Standard errors are clustered at the prior zone and new zone by parcel group levels, using the multiway clustering procedure of Cameron, Gelbach and Miller (2011). *** p<0.01, ** p<0.05, * p<0.10

Table A8: Trends in Neighborhood School Attendance

Expected grade in Fall 2002 (based on 6th grade cohort)	Share attending assigned neighborhood school, by year (based on Fall)							Cohort Average
	2001	2002	2003	2004	2005	2006	2007	
12th grade	0.629	0.549	.	.	.	.	.	0.589
11th grade	0.645	0.608	0.628	.	.	.	.	0.627
10th grade	0.633	0.613	0.615	0.625	.	.	.	0.621
9th grade	0.662	0.569	0.589	0.601	0.621	.	.	0.608
8th grade	0.673	0.517	0.604	0.631	0.660	0.602	.	0.614
7th grade	0.665	0.555	0.542	0.618	0.646	0.580	0.591	0.600
6th grade	.	0.584	0.576	0.603	0.670	0.627	0.651	0.619
Year Average	0.653	0.569	0.588	0.615	0.652	0.605	0.624	0.615

Notes: This table gives the share of students in each grade cohort that attended their assigned "neighborhood" school in each year. Years are based on Fall, so Column 1 shows the share attending their home school in the last year prior to busing. Assignment to cohorts is based on the first year a student appeared in 6th grade in CMS.

Table A9: Impacts of Re-zoning on High School Achievement Test Scores

Panel A: Pooled Sample	English	Algebra I	Geometry	Algebra II
	(1)	(2)	(3)	(4)
Share Minority in New School Zone	-0.038	-0.048	-0.130*	-0.125
	[0.098]	[0.081]	[0.077]	[0.134]
Panel B: Effects by Racial Group				
Share Minority in New School Zone *				
Non-Minority Student	-0.066	-0.124	-0.126	-0.124
	[0.108]	[0.102]	[0.102]	[0.154]
Minority Student	-0.025	-0.017	-0.132*	-0.126
	[0.101]	[0.086]	[0.077]	[0.135]
Observations	23,387	21,378	21,613	21,525

Notes: In Panel A, each cell shows the coefficient and standard error from a separate estimate of equation (1), and is interpreted as the impact of being assigned to a school with 100 percentage points more minority students. Panel B presents results where the impact is allowed to vary by student's own race. Each column shows the results of a separate regression where the dependent variable is indicated in the column heading above; all regressions also control for race by cohort fixed effects, parcel group by prior middle and high school zone fixed effects, and quadratics in 5th grade math and reading scores plus dummies for missing scores. We define "minority" as black and Latino students, and "non-minority" as all other ethnicities (including whites). Standard errors are clustered at the prior zone and new zone by parcel group levels, using the multiway clustering procedure of Cameron, Gelbach and Miller (2011). *** p<0.01, ** p<0.05, * p<0.10

Table A10: Robustness Checks on HS Test Score Impacts Using Imputation

	English I				Algebra I			
	Actual Score	Predicted - 0.5	Predicted Score	Predicted + 0.5	*Actual Score*	Predicted - 0.5	Predicted Score	Predicted + 0.5
Cumulative School % Minority *								
Non-Minority Student	-0.066	-0.095	-0.047	0.001	-0.124	-0.085	-0.051	-0.017
	[0.106]	[0.095]	[0.091]	[0.094]	[0.100]	[0.073]	[0.073]	[0.084]
Minority Student	-0.025	0.023	0.017	0.010	-0.017	0.019	0.021	0.023
	[0.099]	[0.091]	[0.089]	[0.094]	[0.085]	[0.071]	[0.066]	[0.073]
Observations	23,387	27,995	27,995	27,995	21,378	27,995	27,995	27,995
	Geometry				Algebra II			
	Actual Score	Predicted - 0.5	Predicted Score	Predicted + 0.5	*Actual Score*	Predicted - 0.5	Predicted Score	Predicted + 0.5
Cumulative School % Minority *								
Non-Minority Student	-0.126	-0.122*	-0.085	-0.048	-0.124	-0.118*	-0.062	-0.006
	[0.099]	[0.065]	[0.060]	[0.066]	[0.152]	[0.071]	[0.078]	[0.097]
Minority Student	-0.132*	-0.073	-0.082*	-0.090	-0.126	-0.046	-0.071	-0.097
	[0.076]	[0.049]	[0.047]	[0.057]	[0.133]	[0.059]	[0.067]	[0.084]
Observations	21,613	34,007	34,007	34,007	21,525	39,365	39,365	39,365
	Average of All 4 Tests							
	Actual Score	Predicted - 0.5	Predicted Score	Predicted + 0.5				
Cumulative School % Minority *								
Non-Minority Student	-0.182**	-0.164***	-0.117***	-0.070*				
	[0.080]	[0.043]	[0.039]	[0.039]				
Minority Student	-0.115*	-0.084***	-0.086***	-0.091***				
	[0.061]	[0.030]	[0.027]	[0.029]				
Observations	31,675	29,848	29,848	29,848				

Notes: All regressions include fixed effects for racial group, cohort, parcel group, middle by high school zones prior to re-zoning, quadratic controls for 5th grade math and reading scores, and indicator variables for missing 5th grade scores. Columns labeled "Actual Score" display results from Table 3; Columns labeled "Predicted" are based on samples where we impute scores for students with missing test scores using a bivariate regression of high school test scores on 5th grade test scores in the same subject (i.e., English or math). We use either the predicted score itself, or the predicted score plus or minus 0.5 standard deviations. *** p<0.01, ** p<0.05, * p<0.10

Table A11: Impacts of Re-zoning on Additional Outcomes

Panel A: High School Cohorts	Attend Any College	Attend Very Competitive	Number of Arrests	Ln (Total Days Incarcerated)
	(1)	(2)	(3)	(4)
Share Minority in New School Zone *				
Non-Minority Female	-0.032	-0.149***	0.082	0.189
	[0.084]	[0.055]	[0.459]	[0.192]
Non-Minority Male	-0.104	-0.163***	0.284	0.276
	[0.082]	[0.050]	[0.466]	[0.197]
Minority Female	0.039	-0.021	-0.006	0.057
	[0.071]	[0.042]	[0.486]	[0.205]
Minority Male	0.070	-0.043	1.534**	0.654***
	[0.076]	[0.040]	[0.625]	[0.255]
Observations	22,329	22,329	22,329	22,329
Panel B: Middle School Cohorts				
Share Minority in New School Zone *				
Non-Minority Female	-0.114	0.011	-0.126	-0.030
	[0.081]	[0.050]	[0.283]	[0.155]
Non-Minority Male	-0.089	0.083*	-0.103	-0.001
	[0.082]	[0.048]	[0.302]	[0.166]
Minority Female	-0.021	0.057	-0.161	-0.070
	[0.067]	[0.042]	[0.310]	[0.164]
Minority Male	-0.026	0.074*	0.704*	0.417**
	[0.073]	[0.041]	[0.378]	[0.209]
Observations	21,620	21,620	21,620	21,620

Notes: Within panels, each column shows coefficients and standard errors from a separate estimate of equation (1), and is interpreted as the impact of being assigned to a school with 100 percentage points more minority students, where the impact is allowed to vary by the race and gender combinations indicated in each row. Panel A presents results for rising 9th through 12th graders in the Fall of 2002, while Panel B presents results for rising 6th through 8th graders. All regressions control for race by cohort fixed effects, parcel group by prior middle and high school zone fixed effects, and quadratics in 5th grade math and reading scores plus dummies for missing scores. College attendance records are obtained from the NSC data and criminal records are obtained from the Mecklenburg County Sheriff - both can track students who leave CMS schools. We define "minority" as black and Latino students, and "non-minority" as all other ethnicities (including whites). Standard errors are clustered at the prior zone and new zone by parcel group levels, using the multiway clustering procedure of Cameron, Gelbach and Miller (2011). *** p<0.01, ** p<0.05, * p<0.10

Table A12: Main Results separated out by grade cohort

	Expected grade in Fall 2002 (based on 6th grade cohort)						
	12th	11th	10th	9th	8th	7th	6th
Panel A: Graduate from HS	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Share Minority in New School Zone *							
Non-Minority Female	-0.076	-0.215	0.003	-0.149	-0.286**	-0.093	-0.099
	[0.203]	[0.175]	[0.167]	[0.167]	[0.134]	[0.124]	[0.141]
Non-Minority Male	-0.062	-0.206	0.016	-0.257	-0.213	-0.122	-0.033
	[0.206]	[0.178]	[0.169]	[0.168]	[0.148]	[0.120]	[0.143]
Minority Female	-0.024	0.093	0.311*	0.038	-0.084	0.028	0.071
	[0.214]	[0.164]	[0.168]	[0.175]	[0.142]	[0.122]	[0.123]
Minority Male	-0.289	0.035	0.205	0.015	-0.193	-0.079	0.078
	[0.216]	[0.171]	[0.149]	[0.174]	[0.127]	[0.118]	[0.135]
Panel B: Attend 4 Year College							
Share Minority in New School Zone *							
Non-Minority Female	-0.104	-0.261	0.082	-0.180	-0.094	-0.139	-0.104
	[0.225]	[0.188]	[0.182]	[0.140]	[0.138]	[0.144]	[0.153]
Non-Minority Male	-0.115	-0.318*	0.024	-0.142	-0.074	-0.014	-0.004
	[0.215]	[0.185]	[0.186]	[0.140]	[0.136]	[0.137]	[0.149]
Minority Female	-0.145	-0.139	0.167	0.053	0.061	0.000	0.045
	[0.194]	[0.161]	[0.156]	[0.124]	[0.118]	[0.118]	[0.118]
Minority Male	-0.006	-0.120	0.170	-0.020	0.196	-0.030	0.007
	[0.193]	[0.161]	[0.157]	[0.126]	[0.120]	[0.120]	[0.129]
Panel C: Ever Arrested							
Share Minority in New School Zone *							
Non-Minority Female	-0.191	0.117	0.041	0.021	0.024	0.090	-0.113
	[0.123]	[0.097]	[0.102]	[0.117]	[0.075]	[0.077]	[0.094]
Non-Minority Male	-0.257**	0.150	0.066	0.081	0.038	0.128	-0.092
	[0.125]	[0.101]	[0.108]	[0.119]	[0.081]	[0.085]	[0.103]
Minority Female	-0.183	0.017	0.121	0.067	0.077	0.037	-0.051
	[0.125]	[0.103]	[0.107]	[0.105]	[0.080]	[0.090]	[0.097]
Minority Male	-0.058	0.205*	0.219*	0.235**	0.125	0.176*	0.072
	[0.156]	[0.110]	[0.112]	[0.112]	[0.084]	[0.096]	[0.114]
Sample Size	4,584	5,358	6,012	6,375	7,050	7,437	7,133

Notes: Each panel shows coefficients and standard errors from a separate estimate of equation (1), and is interpreted as the impact of being assigned to a school with 100 percentage points more minority students, where the impact is allowed to vary by the race and gender combinations indicated in each row. Assignment to cohorts is based on the first year a student appeared in 6th grade in CMS. Regressions are run separately by the grade cohort indicated in each column. All regressions control for race by cohort fixed effects, parcel group by prior middle and high school zone fixed effects, and quadratics in 5th grade math and reading scores plus dummies for missing scores. College attendance records are obtained from the NSC data, which can track students who leave CMS schools. Criminal records are obtained from the Mecklenburg County Sheriff, and can track students who leave CMS schools. We define "minority" as black and Latino students, and "non-minority" as all other ethnicities (including whites). Standard errors are clustered at the prior zone and new zone by parcel group levels, using the multiway clustering procedure of Cameron, Gelbach and Miller (2011). *** p<0.01, ** p<0.05, * p<0.10

Table A13: Main Results excluding students who were missing in Fall 2002

Panel A: High School Cohorts	HS Grad	Attend 4 Year College	Ever Arrested	Ever Incarcerated
	(1)	(2)	(3)	(4)
Share Minority in New School Zone *				
Non-Minority Female	-0.195***	-0.183**	0.018	0.025
	[0.071]	[0.081]	[0.047]	[0.045]
Non-Minority Male	-0.216***	-0.197**	0.029	0.035
	[0.073]	[0.080]	[0.049]	[0.047]
Minority Female	-0.006	-0.052	-0.003	-0.000
	[0.079]	[0.068]	[0.045]	[0.044]
Minority Male	-0.081	-0.016	0.139**	0.103*
	[0.083]	[0.075]	[0.055]	[0.054]
Observations	21,328	21,328	21,328	21,328
Panel B: Middle School Cohorts				
Share Minority in New School Zone *				
Non-Minority Female	-0.151**	-0.100	0.012	0.018
	[0.076]	[0.076]	[0.050]	[0.051]
Non-Minority Male	-0.083	-0.014	0.036	0.033
	[0.081]	[0.075]	[0.054]	[0.055]
Minority Female	0.009	0.033	0.030	0.035
	[0.076]	[0.063]	[0.054]	[0.055]
Minority Male	-0.047	0.063	0.124**	0.129**
	[0.079]	[0.069]	[0.062]	[0.064]
Observations	20,946	20,946	20,946	20,946

Notes: Within panels, each column shows coefficients and standard errors from a separate estimate of equation (1), is interpreted as the impact of being assigned to a school with 100 percentage points more minority students, where the impact is allowed to vary by the race and gender combinations indicated in each row. Panel A presents results for rising 9th through 12th graders in the Fall of 2002, while Panel B presents results for rising 6th through 8th graders. All regressions control for race by cohort fixed effects, parcel group by prior middle and high school zone fixed effects, and quadratics in 5th grade math and reading scores plus dummies for missing scores. Criminal records are obtained from the Mecklenburg County Sheriff, and can track students who leave CMS schools. College attendance records are obtained from the NSC data, which can track students who leave CMS schools. We define "minority" as black and Latino students, and "non-minority" as all other ethnicities (including whites). Standard errors are clustered at the prior zone and new zone by parcel group levels, using the multiway clustering procedure of Cameron, Gelbach and Miller (2011). *** p<0.01, ** p<0.05, * p<0.10

Table A14: Main Results excluding students who moved, 2001-2002

Panel A: High School Cohorts	HS Grad	Attend 4 Year College	Ever Arrested	Ever Incarcerated
	(1)	(2)	(3)	(4)
Share Minority in New School Zone *				
Non-Minority Female	-0.192***	-0.163*	0.002	-0.005
	[0.072]	[0.086]	[0.042]	[0.040]
Non-Minority Male	-0.215***	-0.177**	0.018	0.012
	[0.075]	[0.085]	[0.043]	[0.041]
Minority Female	0.010	-0.026	0.006	-0.019
	[0.083]	[0.078]	[0.044]	[0.040]
Minority Male	-0.052	-0.013	0.128***	0.082*
	[0.084]	[0.086]	[0.047]	[0.046]
Observations	19,588	19,588	19,588	19,588
Panel B: Middle School Cohorts				
Share Minority in New School Zone *				
Non-Minority Female	-0.146**	-0.068	-0.009	-0.006
	[0.075]	[0.089]	[0.048]	[0.048]
Non-Minority Male	-0.082	0.033	0.032	0.019
	[0.082]	[0.088]	[0.051]	[0.051]
Minority Female	0.062	0.067	0.026	0.015
	[0.075]	[0.078]	[0.051]	[0.052]
Minority Male	-0.023	0.089	0.133**	0.131**
	[0.081]	[0.080]	[0.057]	[0.058]
Observations	18,191	18,191	18,191	18,191

Notes: Within panels, each column shows coefficients and standard errors from a separate estimate of equation (1), is interpreted as the impact of being assigned to a school with 100 percentage points more minority students, where the impact is allowed to vary by the race and gender combinations indicated in each row. Panel A presents results for rising 9th through 12th graders in the Fall of 2002, while Panel B presents results for rising 6th through 8th graders. All regressions control for race by cohort fixed effects, parcel group by prior middle and high school zone fixed effects, and quadratics in 5th grade math and reading scores plus dummies for missing scores. Criminal records are obtained from the Mecklenburg County Sheriff, and can track students who leave CMS schools. College attendance records are obtained from the NSC data, which can track students who leave CMS schools. We define "minority" as black and Latino students, and "non-minority" as all other ethnicities (including whites). Standard errors are clustered at the prior zone and new zone by parcel group levels, using the multiway clustering procedure of Cameron, Gelbach and Miller (2011). *** p<0.01, ** p<0.05, * p<0.10

Table A15: Impacts of Re-Zoning on Enrollment in CMS over Time

	Expected grade for on-time progression, based on 6th grade cohort					
	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
	(1)	(2)	(3)	(4)	(5)	(6)
Share Minority in New School Zone *						
Non-Minority Female	-0.046	-0.121**	-0.055	-0.047	-0.051	-0.060*
	[0.061]	[0.054]	[0.036]	[0.038]	[0.036]	[0.033]
Non-Minority Male	-0.063	-0.084	-0.060	-0.032	-0.020	-0.029
	[0.063]	[0.055]	[0.038]	[0.041]	[0.040]	[0.038]
Minority Female	0.016	-0.006	0.088**	0.094***	0.132***	0.137***
	[0.061]	[0.051]	[0.032]	[0.031]	[0.034]	[0.035]
Minority Male	0.012	-0.033	0.026	0.062*	0.063**	0.070**
	[0.065]	[0.047]	[0.029]	[0.031]	[0.031]	[0.032]
Sample Size	14,570	21,620	27,995	34,007	39,365	43,949

Notes: Each column shows coefficients and standard errors from a separate estimate of equation (1), and is interpreted as the impact of being assigned to a school with 100 percentage points more minority students, where the impact is allowed to vary by the race and gender combinations indicated in each row. The outcome is an indicator variable for being enrolled in any CMS school in the "expected grade" in each column. "Expected grade" is calculated as being enrolled in any CMS school in the year that a student should have been in each grade, based on the first time that student entered 6th grade. Sample sizes increase across columns because more cohorts were enrolled in the higher grades post-rezoning. All regressions control for race by cohort fixed effects, parcel group by prior middle and high school zone fixed effects, and quadratics in 5th grade math and reading scores plus dummies for missing scores. Standard errors are clustered at the Prior Zone by Parcel Group level. *** p<0.01, ** p<0.05, * p<0.10

Table A16: Main Results with Movers Only

Panel A: High School Cohorts	HS Grad	Attend 4 Year College	Ever Arrested	Ever Incarcerated
	(1)	(2)	(3)	(4)
Avg. Math Scores in New School Zone *				
Non-Minority Female	-0.316***	-0.114	0.017	0.037
	[0.122]	[0.095]	[0.074]	[0.073]
Non-Minority Male	-0.296**	-0.077	0.011	0.040
	[0.135]	[0.092]	[0.080]	[0.078]
Minority Female	-0.016	-0.026	-0.027	-0.022
	[0.116]	[0.065]	[0.069]	[0.068]
Minority Male	-0.083	0.021	0.160**	0.116
	[0.119]	[0.073]	[0.077]	[0.076]
Observations	11,092	11,092	11,092	11,092
Panel B: Middle School Cohorts				
Avg. Math Scores in New School Zone *				
Non-Minority Female	-0.221*	-0.147	-0.012	-0.034
	[0.117]	[0.106]	[0.083]	[0.084]
Non-Minority Male	-0.128	-0.084	-0.023	-0.044
	[0.128]	[0.102]	[0.088]	[0.090]
Minority Female	-0.022	-0.007	0.022	-0.001
	[0.111]	[0.089]	[0.086]	[0.086]
Minority Male	-0.106	0.054	0.129	0.125
	[0.120]	[0.100]	[0.099]	[0.101]
Observations	11,830	11,830	11,830	11,830

Notes: Within panels, each column shows coefficients and standard errors from a separate estimate of equation (1), and is interpreted as the impact of being assigned to a school with 100 percentage points more minority students, where the impact is allowed to vary by the race and gender combinations indicated in each row. The sample is limited to the approximately 50 percent of students who received a new school assignment in Fall 2002. Panel A presents results for rising 9th through 12th graders in the Fall of 2002, while Panel B presents results for rising 6th through 8th graders. All regressions control for race by cohort fixed effects, parcel group by prior middle and high school zone fixed effects, and quadratics in 5th grade math and reading scores plus dummies for missing scores. College attendance records are obtained from the NSC data, which can track students who leave CMS schools. Criminal records are obtained from the Mecklenburg County Sheriff, and can track students who leave CMS schools. We define "minority" as black and Latino students, and "non-minority" as all other ethnicities (including whites). Standard errors are clustered at the prior zone and new zone by parcel group levels, using the multiway clustering procedure of Cameron, Gelbach and Miller (2011). *** p<0.01, ** p<0.05, * p<0.10

Table A17: Main Results excluding "bused" students

Panel A: High School Cohorts	HS Grad	Attend 4 Year College	Ever Arrested	Ever Incarcerated
	(1)	(2)	(3)	(4)
Share Minority in New School Zone *				
Non-Minority Female	-0.209**	-0.189**	-0.006	0.007
	[0.085]	[0.092]	[0.045]	[0.043]
Non-Minority Male	-0.226***	-0.189**	0.011	0.024
	[0.087]	[0.090]	[0.047]	[0.045]
Minority Female	0.000	-0.038	-0.037	-0.026
	[0.097]	[0.086]	[0.044]	[0.042]
Minority Male	-0.049	-0.047	0.115**	0.072
	[0.104]	[0.092]	[0.052]	[0.051]
Observations	21,257	21,257	21,257	21,257
Panel B: Middle School Cohorts				
Share Minority in New School Zone *				
Non-Minority Female	-0.151*	-0.109	0.022	0.023
	[0.077]	[0.080]	[0.048]	[0.050]
Non-Minority Male	-0.078	-0.005	0.048	0.036
	[0.082]	[0.078]	[0.052]	[0.055]
Minority Female	0.039	0.045	0.034	0.034
	[0.079]	[0.065]	[0.053]	[0.054]
Minority Male	-0.053	0.069	0.121*	0.122*
	[0.081]	[0.072]	[0.062]	[0.064]
Observations	20,610	20,610	20,610	20,610

Notes: Within panels, each column shows coefficients and standard errors from a separate estimate of equation (1), is interpreted as the impact of being assigned to a school with 100 percentage points more minority students, where the impact is allowed to vary by the race and gender combinations indicated in each row. We define "bused" students as those that lived in non-contiguous school assignment zones prior to Fall 2002. Panel A presents results for rising 9th through 12th graders in the Fall of 2002, while Panel B presents results for rising 6th through 8th graders. All regressions control for race by cohort fixed effects, parcel group by prior middle and high school zone fixed effects, and quadratics in 5th grade math and reading scores plus dummies for missing scores. Criminal records are obtained from the Mecklenburg County Sheriff, and can track students who leave CMS schools. College attendance records are obtained from the NSC data, which can track students who leave CMS schools. We define "minority" as black and Latino students, and "non-minority" as all other ethnicities (including whites). Standard errors are clustered at the prior zone and new zone by parcel group levels, using the multiway clustering procedure of Cameron, Gelbach and Miller (2011). *** p<0.01, ** p<0.05, * p<0.10

Table A18: Impacts of Re-zoning on High School Course-Taking

	Student Course-Taking		
Panel A: High School Cohorts	# Adv. Math Courses	AP Science	AP English
	(5)	(6)	(7)
Share Minority in New School Zone *			
Non-Minority Student	-0.235*	-0.109*	-0.248**
	[0.130]	[0.065]	[0.101]
Minority Student	-0.195	-0.090*	-0.162*
	[0.128]	[0.055]	[0.086]
Observations	16,423	16,423	16,423
Panel B: Middle School Cohorts			
Share Minority in New School Zone *			
Non-Minority Student	0.351	0.072	0.108
	[0.236]	[0.066]	[0.128]
Minority Student	-0.042	0.058	0.029
	[0.224]	[0.055]	[0.122]
Observations	13,102	13,102	13,102

Notes: Within panels, each column shows coefficients and standard errors from a separate estimate of equation (1), and is interpreted as the impact of being assigned to a school with 100 percentage points more minority students, where the impact is allowed to vary by race as indicated in each row. Panel A presents results for rising 9th through 12th graders in the Fall of 2002, while Panel B presents results for rising 6th through 8th graders. All regressions control for race by cohort fixed effects, parcel group by prior middle and high school zone fixed effects, and quadratics in 5th grade math and reading scores plus dummies for missing scores. All student course-taking results are conditional on being enrolled in CMS in 12th grade. We define "minority" as black and Latino students, and "non-minority" as all other ethnicities (including whites). Standard errors are clustered at the prior zone and new zone by parcel group levels, using the multiway clustering procedure of Cameron, Gelbach and Miller (2011). *** p<0.01, ** p<0.05, * p<0.10

Table A19: Heterogeneity by race and income

Panel A: Impact on nonpoor minority males of an increase in:	HS Test Scores (1)	Attend 4 Year College (2)	Ever Incarcerated (3)
Poor non-minorities	-0.524**	0.421*	0.052
	[0.245]	[0.246]	[0.194]
Non-poor minorities	0.313	0.167	-0.184
	[0.245]	[0.247]	[0.126]
Poor minorities	0.002	0.041	0.016
	[0.047]	[0.059]	[0.039]
F(all groups equal)	0.191	0.220	0.529
Panel B: Impact on poor minority males of an increase in:			
Poor non-minorities	0.348	-0.068	-0.031
	[0.236]	[0.121]	[0.117]
Non-poor minorities	0.470**	0.008	0.034
	[0.239]	[0.126]	[0.127]
Poor minorities	-0.070	0.042	0.088***
	[0.043]	[0.033]	[0.033]
F(all groups equal)	0.012	0.248	0.014
Observations	43,949	43,949	43,949

Notes: Each column shows coefficients and standard errors from a separate estimate of equation (1), where the results are interpreted as the impact of being assigned to a school with a 100 percentage point greater share of students in the demographic group indicated in each row. Non-poor non-minorities are the reference group. All regressions control for race by cohort fixed effects, parcel group by prior middle and high school zone fixed effects, and quadratics in 5th grade math and reading scores plus dummies for missing scores. Column 1 is the average across all non-missing high school test scores in English I, Algebra I, Geometry and Algebra II. College attendance records are obtained from the NSC data and criminal records are obtained from the Mecklenburg County Sheriff - both can track students who leave CMS schools. Standard errors are clustered at the prior zone and new zone by parcel group levels, using the multiway clustering procedure of Cameron, Gelbach and Miller (2011). *** p<0.01, ** p<0.05, * p<0.10