

Online Supplement

Reconsidering rural-nonrural college enrollment gaps: The role of socioeconomic status in geographies of opportunity

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Article: Reconsidering rural-nonrural college enrollment gaps: The role of socioeconomic status in geographies of opportunity
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This online supplement includes sensitivity analyses that:

1. Utilize an alternate coding for the “rural” variable, where the “town” local is included in the “nonrural” category [Tables S1-S3] [Figures S1-S2].
2. Utilize linear probability modeling, rather than the logistic regression analyses in the main article. [Table S4]

It also includes:

3. A version of the figures from the article, but with confidence intervals included on the graphs. [Figures S3-S4]

1. Sensitivity Analyses with the Town locale categorized as Nonrural rather than Rural

Table S1. Means and standard errors of the estimates, for all variables - Town locale categorized as Nonrural rather than Rural

Variable	All Students		Rural Students		Nonrural Students		Difference
	Mean	SE	Mean	SE	Mean	SE	
Attend college	0.75	(0.01)	0.73	(0.01)	0.76	(0.01)	-0.03*
Four-year college	0.51	(0.01)	0.50	(0.02)	0.51	(0.01)	-0.01
SES	-0.04	(0.02)	-0.04	(0.03)	-0.05	(0.02)	0.01
Expect to attend PSE	0.81	(0.01)	0.82	(0.01)	0.81	(0.01)	0.01
GPA	2.74	(0.02)	2.80	(0.02)	2.72	(0.02)	0.08**
Min. academic preparation	0.74	(0.01)	0.75	(0.02)	0.74	(0.01)	0.01
SAT score (std)	-0.33	(0.03)	-0.32	(0.04)	-0.33	(0.04)	0.01
Race/ethnicity							
White	0.52	(0.02)	0.66	(0.02)	0.47	(0.02)	0.19***
Black	0.13	(0.01)	0.12	(0.02)	0.14	(0.01)	-0.02
Latinx	0.22	(0.01)	0.13	(0.01)	0.25	(0.02)	-0.12***
Asian/Pacific Islander	0.04	(0.00)	0.02	(0.00)	0.05	(0.01)	-0.03***
Amer. Indian/Alaska Native	0.01	(0.00)	0.01	(0.00)	0.01	(0.00)	0.00
Multiracial	0.08	(0.00)	0.08	(0.01)	0.08	(0.00)	0.00
Female	0.50	(0.01)	0.48	(0.01)	0.51	(0.01)	-0.03
College-going structure	5.03	(0.04)	5.10	(0.07)	5.01	(0.05)	-0.09
% students in AP (std)	-0.12	(0.03)	-0.33	(0.05)	-0.03	(0.04)	-0.30***
% students on free lunch (std)	0.23	(0.05)	0.13	(0.06)	0.27	(0.06)	-0.14
Observations	13,010		3,740		9,270		

* p<.05; ** p<.01; *** p<0.001

NOTE: All reported sample sizes are rounded to the nearest 10 in accordance with NCES restricted data license.

Significant differences between rural and nonrural indicated.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2009-16 High School Longitudinal Study (HSL:09/16).

Table S2. Average marginal effects on enrolling in postsecondary education - **Town locale categorized as Nonrural rather than Rural**

Independent Variables	Any Postsecondary Enrollment				Four-year College Enrollment			
	Model 1		Model 2		Model 3		Model 4	
	(unadjusted)		(adjusted)		(unadjusted)		(adjusted)	
	AME	(SE)	AME	(SE)	AME	(SE)	AME	(SE)
Rural	-0.04**	(0.01)	-0.04***	(0.01)	-0.01	(0.02)	-0.02	(0.02)
SES	0.17***	(0.01)	0.08***	(0.01)	0.20***	(0.01)	0.07***	(0.01)
Expect to attend PSE			0.15***	(0.02)			0.09***	(0.02)
GPA			0.14***	(0.01)			0.20***	(0.01)
Min. academic preparation			0.03	(0.01)			0.04*	(0.02)
SAT score (std)			0.04***	(0.01)			0.11***	(0.01)
Race/ethnicity								
Black			0.03	(0.02)			0.11***	(0.02)
Latinx			0.04*	(0.02)			-0.07**	(0.02)
Asian/Pacific Islander			-0.01	(0.03)			-0.08**	(0.03)
Amer. Indian/Alaska Native			0.00	(0.05)			0.15*	(0.07)
Multiracial			0.00	(0.02)			-0.03	(0.02)
White			-0.05***	(0.01)			-0.07***	(0.02)
Female			0.03**	(0.01)			-0.03*	(0.01)
College-going structure			0.01	(0.01)			0.00	(0.01)
% students in AP (std)			0.02	(0.01)			0.03**	(0.01)
% students on free lunch (std)			-0.02*	(0.01)			0.00	(0.01)
Observations	13,010		13,010		10,510		10,510	
Log likelihood	-2,069,215		-1,670,685		-2,518,526		-1,942,112	
McFadden's R ² (adjusted)	0.078		0.256		0.094		0.301	

* p<.05; ** p<.01; *** p<0.001

NOTE: All reported sample sizes are rounded to the nearest 10 in accordance with NCES restricted data license.

Significant differences between rural and nonrural indicated.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2009-16 High School Longitudinal Study (HSLs:09/16).

Table S3. Probability of enrolling in postsecondary education at representative values of SES, by rural vs nonrural status - **Town locale categorized as Nonrural rather than Rural**

	Unadjusted (Model 1)			Adjusted (Model 2)		
	Rural	Nonrural	Diff	Rural	Nonrural	Diff
Any Postsecondary Enrollment						
SES=-2	0.27	0.35	-0.08	0.50	0.59	-0.09
SES=-1	0.52	0.59	-0.07*	0.62	0.68	-0.06**
SES=0	0.76	0.79	-0.03**	0.72	0.76	-0.04**
SES=1	0.90	0.91	-0.01	0.81	0.83	-0.02
SES=2	0.96	0.97	-0.01	0.88	0.88	0.00
Four-year College Enrollment						
SES=-2	0.22	0.16	0.06	0.37	0.36	0.01
SES=-1	0.38	0.34	0.04	0.42	0.43	-0.01
SES=0	0.58	0.58	0.00	0.48	0.50	-0.02
SES=1	0.75	0.79	-0.04	0.54	0.57	-0.03
SES=2	0.87	0.91	-0.04	0.60	0.63	-0.03

* p<.05; ** p<.01; *** p<0.001

NOTE: Significant differences between rural and nonrural indicated.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2009-16 High School Longitudinal Study (HSL:09/16).

Figure S1. Probabilities of enrolling in postsecondary education across SES, by rural vs nonrural status - **Town locale categorized as Nonrural rather than Rural**

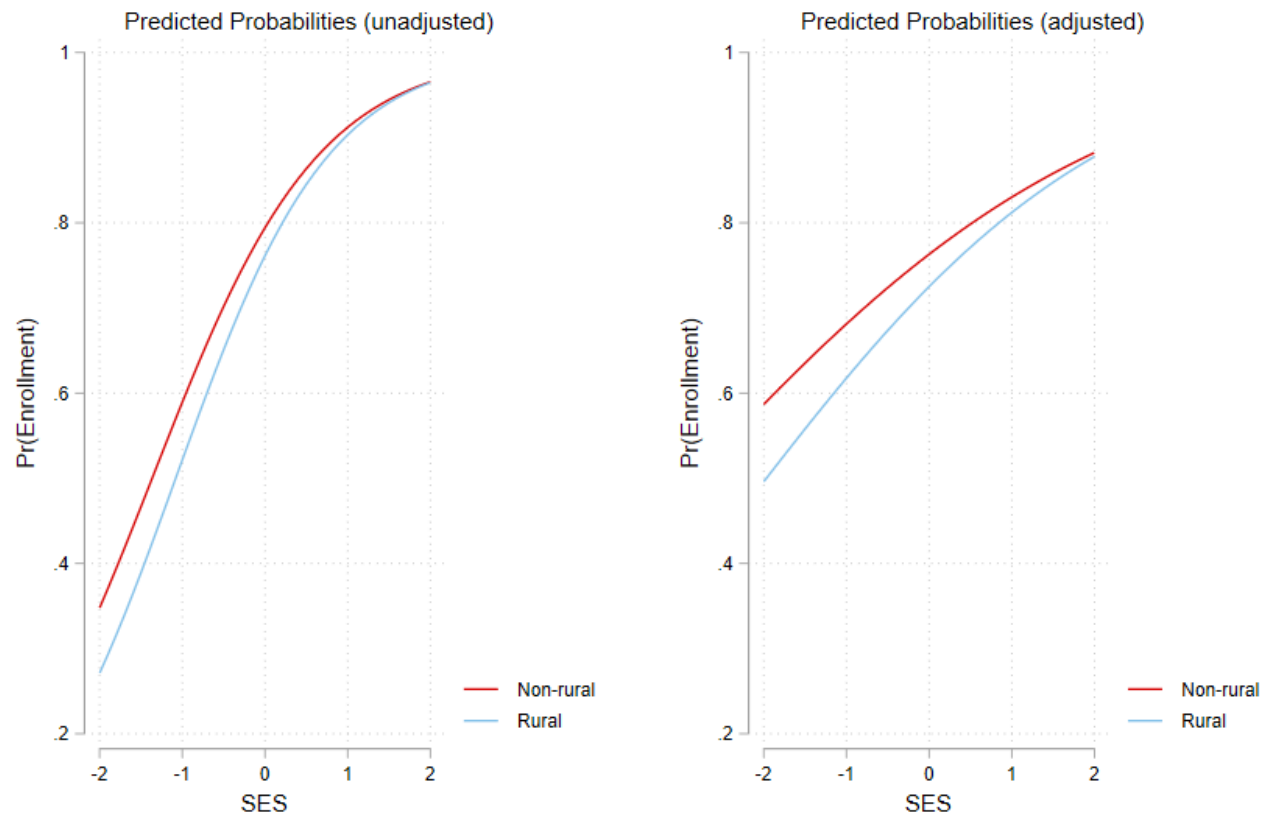
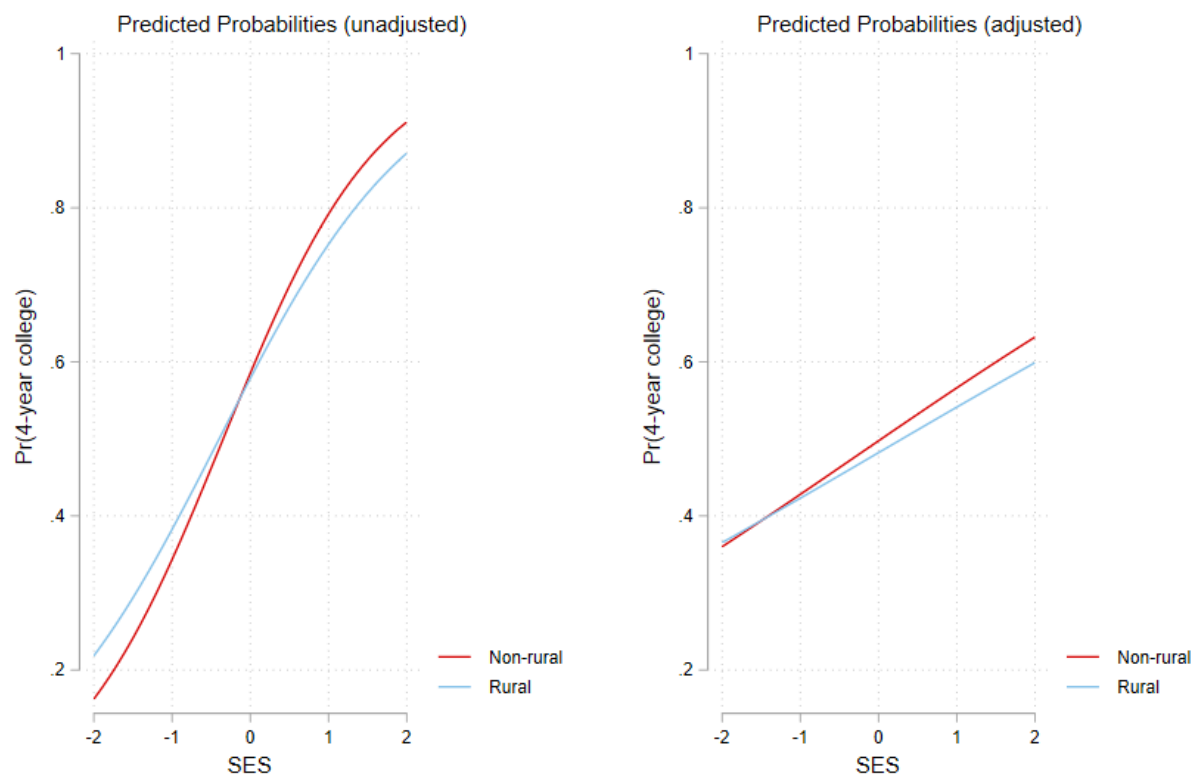


Figure S2. Probabilities of attending four-year college across SES, by rural vs nonrural status - **Town locale categorized as Nonrural rather than Rural**



2. Sensitivity analyses utilizing linear probability modeling, rather than the logistic regression analyses in the main article.

Table S4. Average marginal effects (OLS) on enrolling in postsecondary education - **linear probability model**

Independent Variables	Any Postsecondary Enrollment				Four-year College Enrollment			
	Model 1 (unadjusted)		Model 2 (adjusted)		Model 3 (unadjusted)		Model 4 (adjusted)	
	AME	(SE)	AME	(SE)	AME	(SE)	AME	(SE)
Rural	-0.05***	(0.01)	-0.05***	(0.01)	-0.03	(0.02)	-0.05**	(0.02)
SES	0.16***	(0.01)	0.06***	(0.01)	0.20***	(0.01)	0.06***	(0.01)
Expect to attend PSE			0.19***	(0.02)			0.10***	(0.02)
GPA			0.17***	(0.01)			0.22***	(0.01)
Min. academic preparation			0.04**	(0.02)			0.03	(0.02)
SAT score (std)			0.03**	(0.01)			0.11***	(0.01)
Race/ethnicity								
Black			0.03	(0.02)			0.12***	(0.02)
Latinx			0.04*	(0.02)			-0.08***	(0.02)
Asian/Pacific Islander			-0.01	(0.03)			-0.08**	(0.03)
Amer. Indian/Alaska Native			-0.02	(0.07)			0.13*	(0.05)
Multiracial			0.01	(0.03)			-0.03	(0.02)
White			-0.05**	(0.02)			-0.06***	(0.02)
Female			0.02*	(0.01)			-0.00	(0.01)
College-going structure			0.00	(0.01)			0.00	(0.01)
% students in AP (std)			0.01	(0.01)			0.03*	(0.01)
% students on free lunch (std)			-0.03*	(0.01)			-0.01	(0.01)
Observations	13,010		13,010		10,510		10,510	
R ²	0.08		0.27		0.12		0.35	

* p<.05; ** p<.01; *** p<0.001

NOTE: All reported sample sizes are rounded to the nearest 10 in accordance with NCES restricted data license.

Significant differences between rural and nonrural indicated.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2009-16 High School Longitudinal Study (HSL:09/16).

3. A version of the figures from the article, but with confidence intervals included on the graphs.

Figure S3. Probabilities of attending four-year college across SES, by rural vs nonrural status - **Town locale categorized as Rural, Confidence Intervals Included**

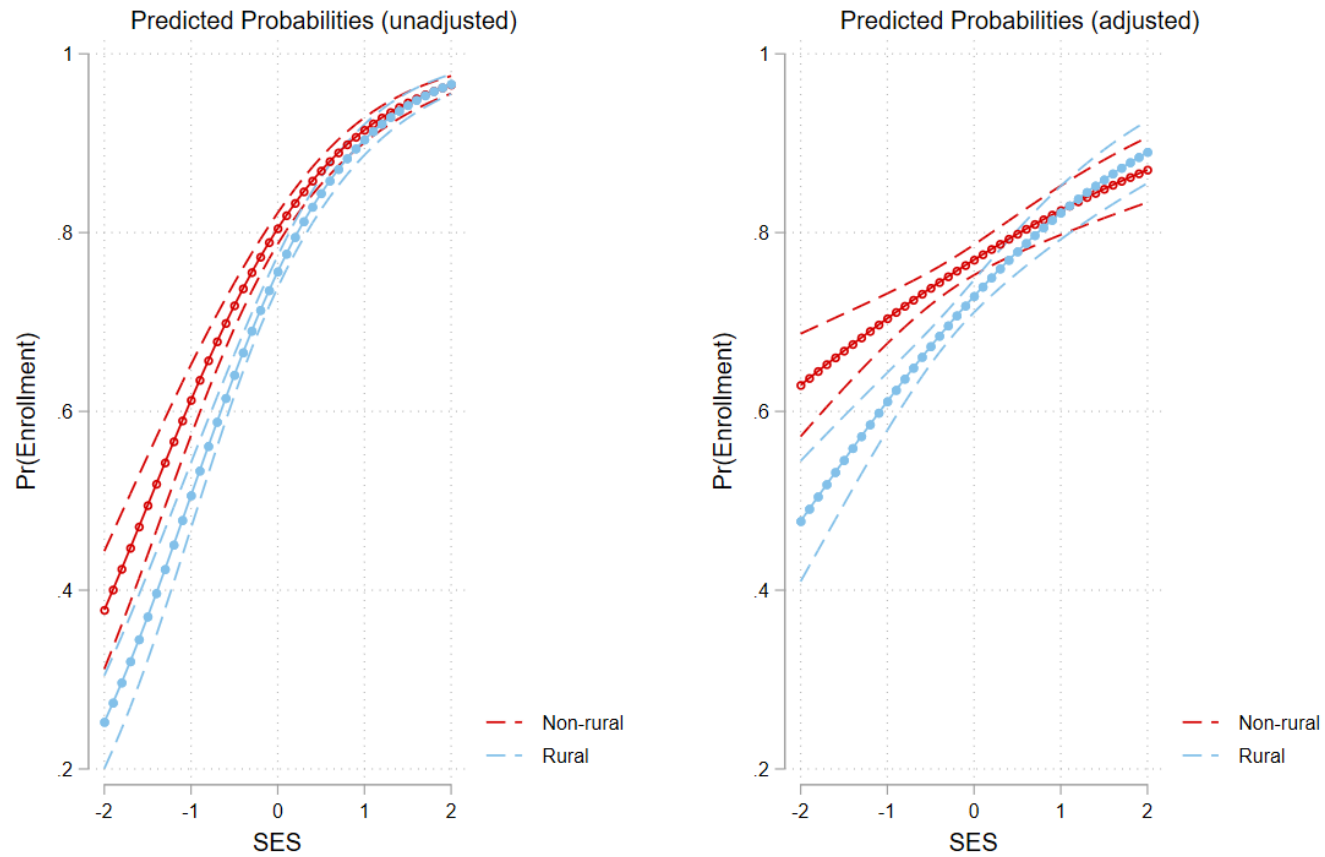


Figure S4. Probabilities of attending four-year college across SES, by rural vs nonrural status - **Town locale categorized as Rural, Confidence Intervals Included**

