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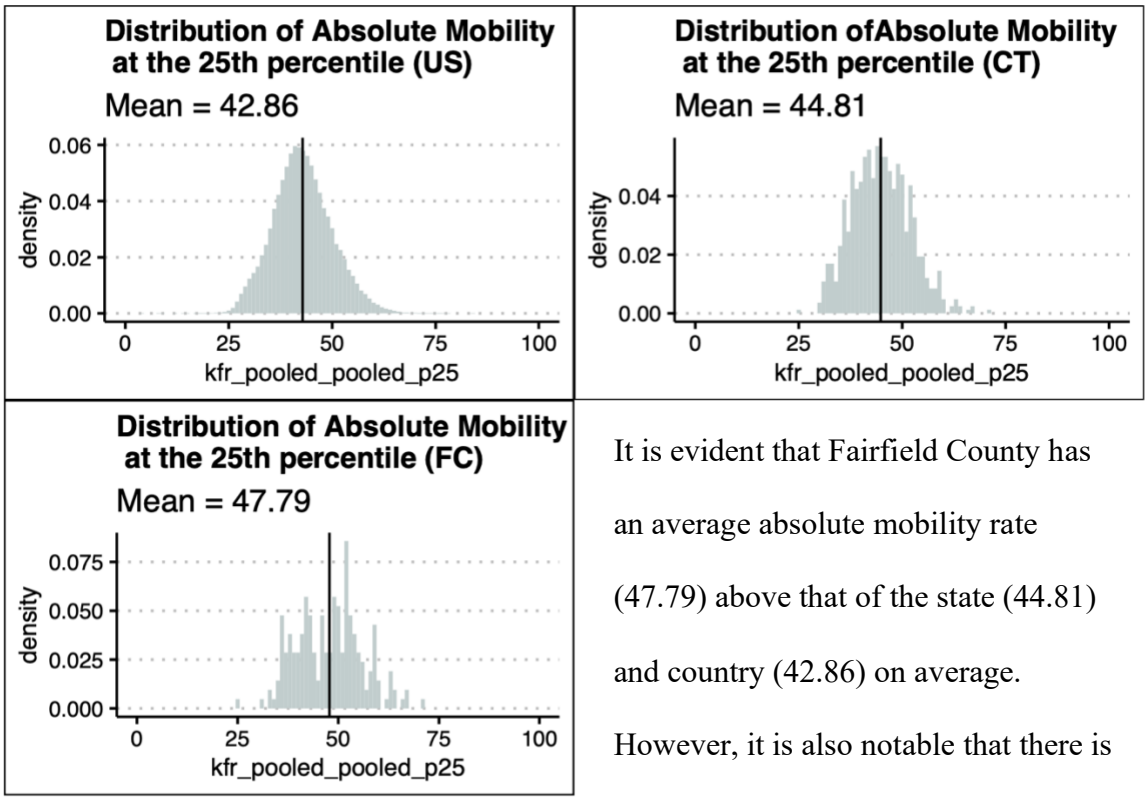
Ec50 Empirical Project 1

Social Mobility in Fairfield County, CT: The Effects of Education

Introduction: Fairfield County, CT is a county in southwestern Connecticut. The county is a fascinating study for social mobility because, although it outpaces both national and state level social mobility rates, it also is home an above average variation in social mobility rates. In this memo, I will first provide summary statistics of social mobility in the county, then present a hypothesis on factors that may influence social mobility, and finally test that hypothesis using regression analysis.

Summary Stats: The graphs below show the distributions of the variable kfr_pooled_pooled_p25 on the national, state (CT), and county (Fairfield County) level). *The krf_pooled_pooled_p25 corresponds to the absolute mobility at the 25th percentile statistic used by Chetty et. al.[1]



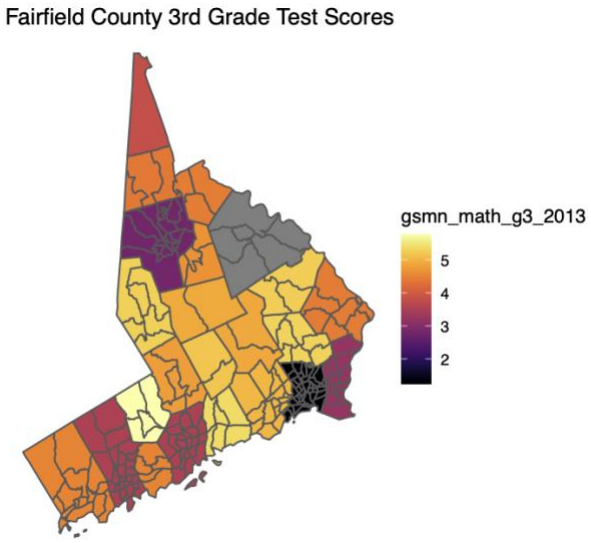
It is evident that Fairfield County has an average absolute mobility rate (47.79) above that of the state (44.81) and country (42.86) on average. However, it is also notable that there is a wide distribution of mobilitv rates

[1] Chetty et al., "The Opportunity Atlas."

of Fairfield County. This above average variation is reflected in the comparative standard deviations seen at the national, state, and county levels (see table to the right). The natural follow up question to seeing this kind of variation is what factors make upward mobility higher in some places than others? There are many ways to approach this question, as many different variables predict upward mobility in a neighborhood (including level of neighborhood segregation, level of income inequality, school quality, family structure, and level of social capital.)[2] The correlation between school quality and upward mobility caught my eye in the context of Fairfield County, because there is a striking amount of variation in school quality within the county (see map below). * School quality is measured by third grade test scores, where a score of 3 implies students are testing at a third-grade level, 4 implies students are testing at a fourth-grade level, and so on *

Standard Deviations: US, CT, FC
FC has largest sd

place	sd_kfr_pooled_pooled_p25
Fairfield County	8.15
CT	7.00
USA	7.12



There is a wide range of education outcomes shown on this map. The city of Bridgeport (shown in black on the map) lags behind the rest of the state in student testing while other areas produce far above third grade level test scores. In the following section, I briefly discuss the theoretical underpinnings of why education quality may influence mobility.

[2] Chetty, "Lecture 4: Policies to Increase Upward Mobility I."

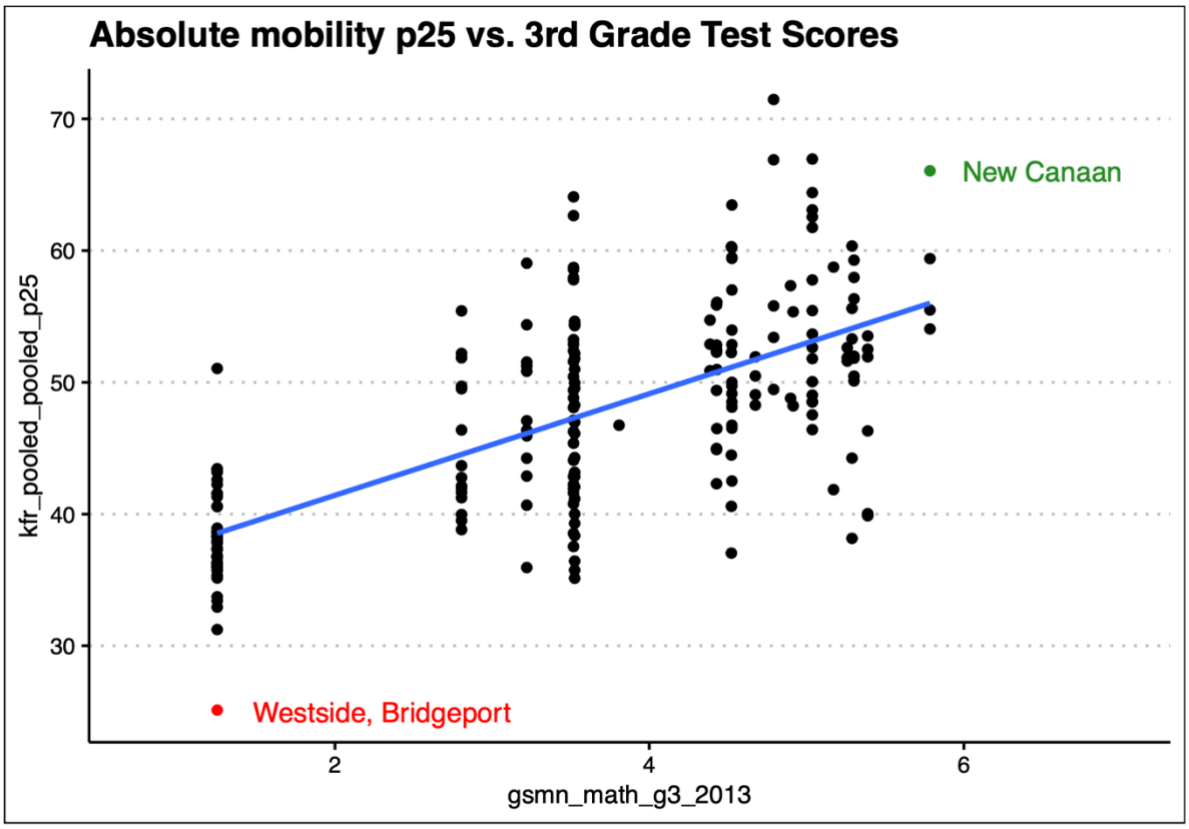
Education and Social Mobility: Theory and Hypothesis:

There is an extensive amount of scholarship that discusses the importance of education for a child's future. The most theory suggests that education decreases the importance of individual class and social statuses and allows students the opportunity to prove themselves in school and advance in an academic meritocracy.[3] As such, any student capable enough to succeed in the classroom can use their education to get a good job, attend college, etc. It follows, then, that if a student does not have access to a quality school, they miss out on an essential opportunity for upward mobility. Of course, the reality of each student being put on an equal playing field is perhaps inaccurate, as higher income children tend to be better prepared before entering the classroom.[4] Despite this potential imbalance, education still provides low-income children with a space to achieve outside of their home environment. As such, denying children access to quality education denies them the chance to achieve academically and the future success academic achievement may bring. For these reasons, I hypothesize that increased school quality is associated with higher levels of upward mobility. To test this hypothesis, I will first do a regression analysis of upward mobility versus school quality for all census tracts in Fairfield County and then discuss the school quality in two specific neighborhoods: New Canaan and the Westside of Bridgeport.

Regression analysis:

The following table and scatter plot show the relationship between upward mobility and school quality in Fairfield County.

[3] Brown, "Education, Opportunity and the Prospects for Social Mobility."
[4] Teese, Lamb, and Duru-Bellat, *International Studies in Educational Inequality, Theory and Policy*.



	Dependent variable:
	kfr_pooled_pooled_p25
gsmn_math_g3_2013	3.852***
	(0.318)
Constant	33.726***
	(1.238)
Observations	204
R^2	0.421
Adjusted R^2	0.418
Residual Std. Error	6.258 (df = 202)
F Statistic	146.887*** (df = 1; 202)
Note:	*p<0.1; **p<0.05; ***p<0.01

These regression results support the hypothesis that quality education is associated with higher rates of upward mobility. Looking at the scatter plot, there is a positive relationship between upward mobility at the 25th percentile and third grade test scores. In the next section, I will discuss upward mobility in Bridgeport and New Canaan, two neighborhoods on the extreme

ends of the education spectrum. I chose to use a scatter plot instead of a binned scatter plot because there were few enough observations to be able to see the linear pattern without using a binned scatter plot and using a binned scatter plot would not allow us to see the detailed variation in the data. Moving onto the regression results, the coefficient for gsmn_math_g3_2013 is positive and statistically significant. Substantively, the coefficient means that for every one increase in testing score, upward mobility at the 25th percentile increases 3.85 points on average. This coefficient is statistically significant and practically significant, as 3.85 is just under ½ of the standard deviation of upward mobility in Fairfield Count (8.15). In summary, the scatter plot and regression results support the hypothesis that better education is associated with higher rates of upward mobility.

Schools in New Canaan and Bridgeport: New Canaan is a town Southwestern CT with a population of about 20,000.[5] New Canaan is in the 99.75 percentile for education in the county. Bridgeport is a coastal industrial city about a 30-minute drive east of New Canaan. The westside neighborhood in Bridgeport is in the bottom 1.8 percentile of education in the county. Although the two neighborhoods are just 30 minutes apart, their schools could not be more different. Predictably, their rates of upward mobility are also drastically different. In New Canaan, kids born with parents in the 25th percentile on average end up in the 66th percentile of the national income distribution. This mobility rate is in the 99.85th percentile of mobility rates across the county. On the other end of the spectrum, kids born in the westside of Bridgeport with parents in the 25th percentile on average stay in the 25th percentile. This mobility rate is in the .2 percentile of mobility rates across the country.

[5] Russo, Luhtala, and Sapienza, "Healthy Collaboration Is Good for All."

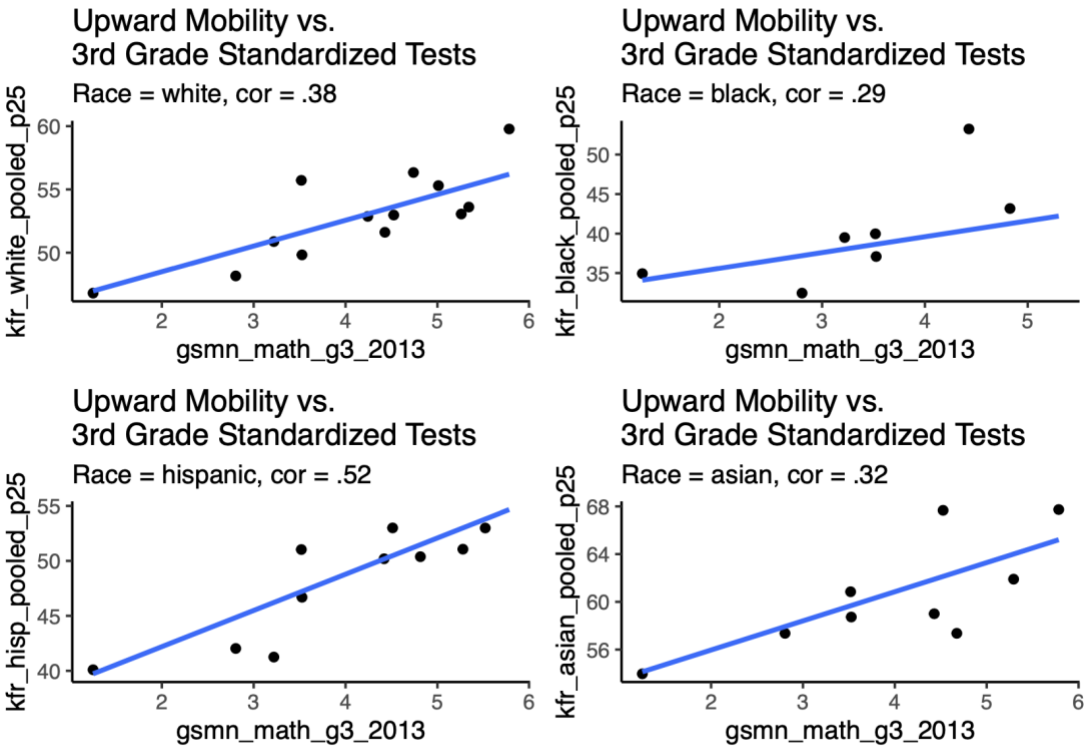
The comparison of these neighborhoods shows both the incredibly wide range of mobility and education outcomes in Fairfield County as well as exemplify the correlation between education and upward mobility. Of course, there are many other differences between New Canaan and Bridgeport, and as such these results should not be treated as causal. On that note, the analysis in this memo is purely descriptive, and because we do not use a randomized or quasi experimental method or control for other neighborhood differences such as average income, poverty rate, median rent, etc., **we cannot claim any causal effects with regards to education and mobility based on this analysis.**

Although this research is not causal, it should still be considered seriously amongst policymakers in Connecticut. A key takeaway from this memo is that there is a strong relationship between school quality and upward mobility. Although other factors most definitely influence a child's economic outcomes, other research has found a causal relationship between school quality and life outcomes.[6] As such, public attention on increasing school quality in low mobility areas could have a substantial impact improving economic outcomes for low income children.

Before concluding, it is worth noting that the relationship between school quality and upward mobility varies across racial subgroups. The binned scatter plots below show the

[6] Dobbie and Fryer Jr., "Are High-Quality Schools Enough to Increase Achievement among the Poor?"

different correlations between upward mobility and school quality for different racial groups in Fairfield County.



The correlation between school quality and upward mobility is strongest for the Hispanic population, followed by the white population, Asian population, and black population. This observation is interesting because it suggests that education is not as effective of a route to upward mobility for the black population compared to whites, Hispanics, and Asians. Again, this analysis is not causal, however, it does provide clues as to where to focus future research and policy efforts.

Works Cited

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