Observing Upward Mobility in Toms River, New Jersey

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ECON 50: Using Big Data to Solve Economic and Social Problems

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Analyzing the Opportunity Atlas, I hypothesized that the differences in upward mobility of neighboring Census tracts in my home area of Toms River, New Jersey was a result of different job opportunities, taxes, populations, and group preferences. One notable group I was thinking of when I made the hypothesis was Lakewood, New Jersey, which has an extremely large Hasidic Jewish population. Therefore, differences in cultures, values, and preferences can account for differences in upward mobility. Furthermore, there is Manchester, New Jersey, which is a significantly smaller town than Toms River and has a much poorer municipality. These first-hand differences tipped me off to this hypothesis. Furthermore, segregation could be a factor in differences in upward mobility and these differences in values. Therefore, in order to test this hypothesis, I will observe different factors and see the layout of these groups.

To begin with, we can first look at some of the social effects impacting these areas. As seen in Figures 3 to 5, the upward mobility varies across Ocean County depending on the racial group observed. Black children exhibit a skewed upward mobility in the county, while hispanic and white children exhibit a symmetric distribution. White children exhibited a greater upward mobility on average than hispanic or black children. Clearly, there is a large difference in upward mobility across races in Ocean County. Further subsetting some of these populations based upon my hypothesis, I observed the Opportunity Atlas to get a more visual distribution of these groups. Looking at Figure 2, we can clearly see a large amount of segregation occurring in Ocean County. For black children, a majority of the locations are grey, with small pockets in Manchester, Lakewood, and southern Toms River. This case is further depicted in Table 1, in which a mean upward mobility could not even be calculated due to lack of data in the

Manchester tract. This is also the case for hispanic children, with more being represented across Ocean County.

In order to observe some of the effects of different values on upward mobility, I ran multiple correlations with different parameters that can get an essence of values, schooling, and environment. Looking at Figure 6, I ran correlations with the pooled upward mobility variable of `kfr_pooled_pooled_p25` and several other parameters. Some of these include the share of single parent households with children in 1990, 2000, and 2010, the poverty rate in 1990, 2000, and 2010, the population density, commute time, and math scores. Observing this figure, and it becomes obvious that upward mobility for pooled children groups across Ocean County is negatively and strongly correlated with the share of single parent households, share of people born outside the U.S., and poverty rate. Further, the upward mobility is positively and strongly correlated with math scores, and share of people with college degrees or more. Therefore, in Ocean County, success later in life seems to significantly depend upon whether or not the child is brought up in a community that values education, the nuclear family, and being a citizen. Things such as having an immigrant family, being raised by a single parent, or living in an area with a high poverty rate seem to impact a child having a low upward mobility later in life.

In order to get a better idea of this effect, I ran correlations with black, white, and hispanic children for each of the parameters. As seen in Figure 7, black children's upward mobility correlated most significantly with mean commute time for parents. Interestingly, I thought about what could be contributing to this correlation. However, this could be due to parents who work outside of the town the children grow up in could make more money or have a job that would possibly promote their children to go to college or go into that stable occupation.

In Figure 8, white children correlated most with the fraction of people with college degrees in the area. This shows that white children depend mainly upon the presence of educated adults in their community, most likely because they typically experience less poverty and discrimination than other racial groups. Finally, in Figure 9, hispanic children had low correlations for all parameters (most likely due to small sample size), but they had a high negative correlation with poverty rates. This suggests that hispanic children depend mainly upon whether or not their parents can get jobs in times of financial difficulties and if they are surrounded by other poor families.

Looking at some outside data, as seen in Figure 10, outside websites have shown that Lakewood, New Jersey has some of the largest proportion of white people in its municipality throughout the state of New Jersey. Furthermore, as seen in Table 2, it has a significantly high population density, towering over the Toms River and Manchester tracts. The Lakewood tract directly north of my home tract encompasses a majority of Lakewood and is extremely red. From personal experience, I know a majority of Lakewood is generally poorer, where a majority of the inhabitants live in affordable housing and almost everybody walks to necessary locations. Since the town of Lakewood mainly consists of white residents, then we can focus on the observation made from Figure 8 where white children's upward mobility throughout Ocean County is mainly correlated with how educated other residents are. Something extremely interesting was that although in Table 3, Lakewood actually has the highest proportion of college graduates. However, in Table 4, Lakewood has almost 3 times the poverty rate of both Toms River and Manchester tracts. Further, it also has a lower upward mobility than Toms River and Manchester (pooled), as seen in Table 1. After extensive contemplation, I concluded that the situation could be similar to Atlanta, which has booming job and economic growth, but extremely low upward

mobility. Many wealthy, educated individuals can be going into Lakewood to make specific businesses on the borders, while there exists a main grove of poor individuals. Furthermore, Lakewood is significantly smaller than Manchester and Toms River (both massive townships), and so a small amount of college graduates can drastically increase the proportion.

With Manchester, almost the opposite scenario occurs. There exists a seemingly low poverty rate (Table 4), and yet there seems to be a significantly lower proportion of college graduates than Toms River or Lakewood (Table 3). Additionally, we know that from Table 1, Manchester also suffers from a low upward mobility for children (pooled). Therefore, while many of the residents may not be living in extreme poverty, many of them are also uneducated. As such, since a majority of the residents are also white as designated from the lack of data for other racial groups in parameters, then that means we can apply the correlation chart from Figure 8 to the children. That graph showed that upward mobility was correlated with having an educated community, and therefore Manchester follows this trend with most of its white residents having low upward mobility and a low proportion of college graduates. From personal observations, Manchester is quite rural with a small town mindset.

Finally, Toms River serves as a good indicator for an average town. It has a generally average upward mobility, a fairly good amount of college graduates, and a relatively low poverty rate. Furthermore, it definitely is the most racially diverse out of the three tracts. Looking at these three tracts in my community, I find I am able to conclude that cultures, values, and preferences in a community and differences in individual towns do have a significant impact on a child's upward mobility. Furthermore, I found that segregation seemed to have a negative effect on poverty rate and upward mobility. Clearly, nothing can be completely conclusive due to the

nature of the correlative relationships and small datasets, but the data is meaningful nonetheless. Furthermore, we cannot conclude that any of these are key predictors or have causal effects due to the same reasons mentioned above.

Ocean County is an interesting place in New Jersey and my home. After analyzing data in my home and neighboring tracts, I learned quite a lot. Economic opportunity seems extremely variable, and I never realized the extent to which a few miles could have on the rest of one's life. Two key lessons I could discuss with a policymaker are racial integration and education. During my analyses, I discovered a jarring amount of segregation in my surrounding community. Furthermore, segregation seemed to have a very negative impact on upward mobility. This segregation specifically negatively impacted white residents in both Lakewood and Manchester, meaning having diversity is beneficial for all racial groups. Racial integration could help bring different values and experiences for children to inhabit. Furthermore, education could greatly increase awareness for children so they have a choice in what they want to do with their life. Children born in some communities can only be exposed to one thing, and so may not realize there are a plethora of options for them to follow in life. Improving education and promoting education as a valuable goal is something that I would feel would significantly impact all communities in surmounting low upward mobility.

Personally, I am grateful to have gone to a very diverse elementary school on the border of Lakewood. I was able to meet a wide range of people from different backgrounds. I actually lived somewhere else before moving in 3rd grade. Before moving, all of my friends were white like me. After moving to my current home after my dad lost his job, I went to Citta Elementary, which is one of the poorer elementary schools in Toms River. There, I met my best friend Thang

Ta-ngo in 3rd grade. I would go over to his house and he'd talk about his Vietnamese culture. I'd talk with his family and eat their home-cooked meals. I always felt extremely welcome, and they always supported me and pushed me to work hard in elementary school. My friend Thang and I would go to his house and play video games while quizzing each other on our multiplication times tables. Once going to high school, I had the opportunity to go to a public high school further south in New Jersey. While there, once again a majority of people were white, and I soon realized that a lot of other people had not had the experiences I've had. Furthermore, I am a first generation college student, so I never knew higher education was a possibility until meeting my friend Thang. He would show me things like Youtube and different colleges and tell me that we would be applying in a few years. My friend Thang and I still keep in touch to this day. He lives in North Carolina now, but we always hang out over break. Despite meeting 10 years ago, we still crack jokes about how'd we play basketball after school in third grade or mess around in class. Therefore, from my analyses and personal experiences, I've learned that meeting others that are different can change one's life for the better and push them to move upward. The determinants of economic opportunity are not set in stone, but are always in motion. People are the solution, in my eyes, to improving this economic opportunity for everyone.

Table 1: Mean upward mobility for each of the three observed tracts in Toms River, Lakewood, and Manchester, New Jersey. The values are split upon black, white, and hispanic children, along with a pooled row of all the races. Drastically, the Toms River tract experienced much more upward mobility than the Lakewood and Manchester tract.

	Mean Upward Mobility		
	Toms River Tract	Lakewood Tract	Manchester Tract
Black Children	0.330	0.323	-
White Children	0.487	0.390	0.345
Hispanic Children	0.463	0.348	-
Pooled	0.465	0.350	0.355

Table 2: Mean population density for each of the three observed tracts in Toms River, Lakewood, and Manchester, New Jersey. Lakewood has a significantly higher population density than the other tracts.

Mean Population Density		
Toms River Tract	Lakewood Tract	Manchester Tract
2000.487	2925.033	1136.805

Table 3: Mean proportion of residents who attend college for each of the three observed tracts in Toms River, Lakewood, and Manchester, New Jersey. Manchester has a significantly lower proportion of college graduates than Toms River or Lakewood.

Mean Proportion of College Graduates		
Toms River Tract	Lakewood Tract	Manchester Tract
0.227	0.246	0.141

Table 4: Mean poverty rate in 2010 of the three observed tracts in Toms River, Lakewood, and Manchester, New Jersey. Lakewood has the highest poverty rate out of the three.

Mean Poverty Rate		
Toms River Tract	Lakewood Tract	Manchester Tract
0.088	0.225	0.066

References

Towncharts. (2020). Lakewood NJ Demographics data. Retrieved from

https://www.towncharts.com/New-Jersey/Demographics/Lakewood-CDP-NJ-Demograph

ics-data.html
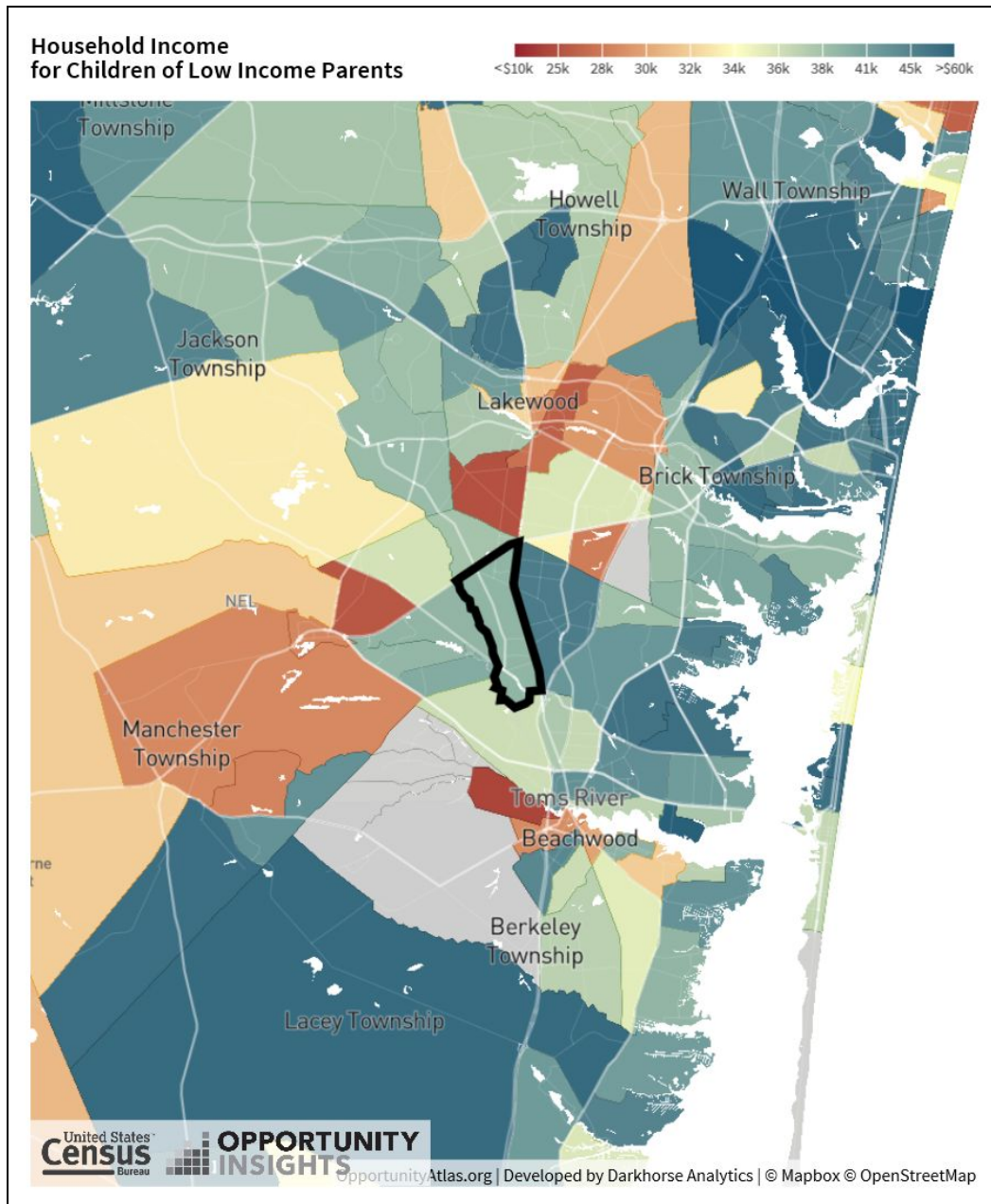
Figure 1: Image of the Opportunity Atlas map, with my home tract highlighted in black. The blueish colors represent a higher upward mobility, while redder colors represent a lower upward mobility. Further, Lakewood (North of my tract) and Manchester (West of my tract) have a considerable amount of low upward mobility.
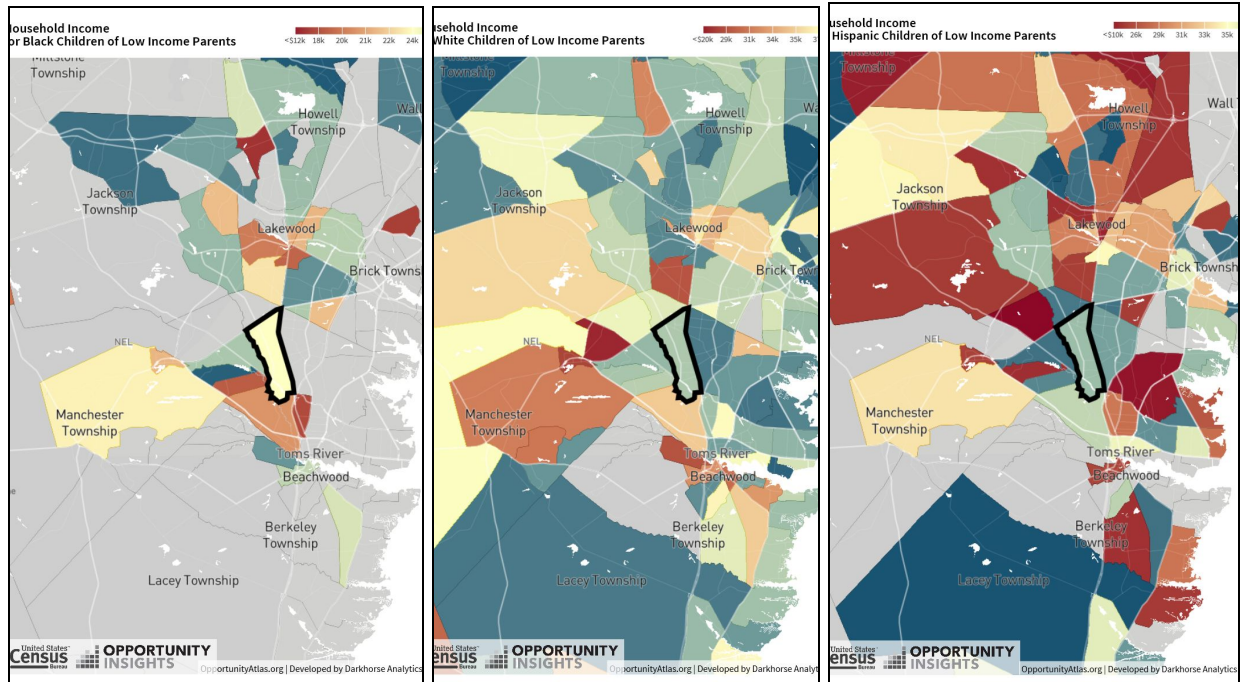
Figure 2: Images of the Opportunity Atlas around my home tract (highlighted in black), with my home tract highlighted in black. The blueish colors represent a higher upward mobility, while redder colors represent a lower upward mobility. The order is black children in the first image, white children in the second image, and hispanic children in the third image. Notice a large amount of racial segregation, with black children mainly living in south Toms River, Manchester, or Lakewood.
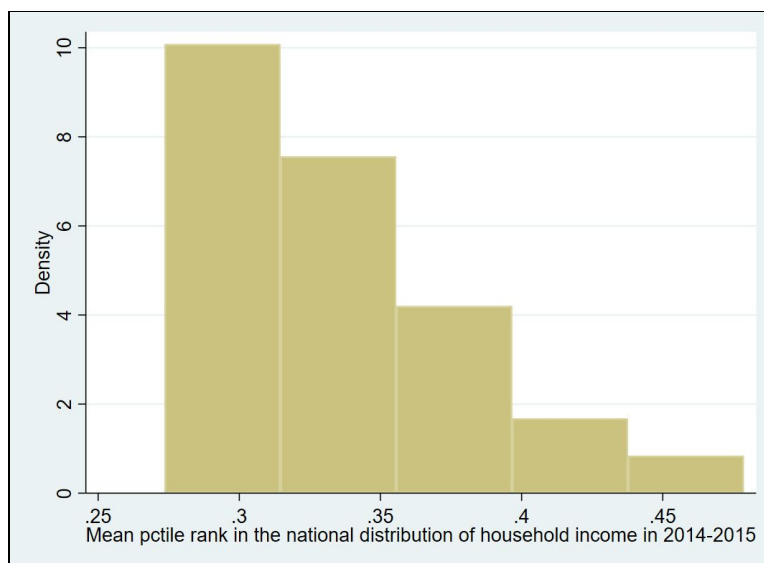
Figure 3: Histogram of the mean percentile rank in the national distribution at age 31 to 37 for black children with parents at the 25th percentile of the national income distribution for Ocean County, New Jersey. For black children, the distribution of upward mobility is fairly skewed, with a majority of black children experiencing a mean percentile ranking of the 30th percentile.
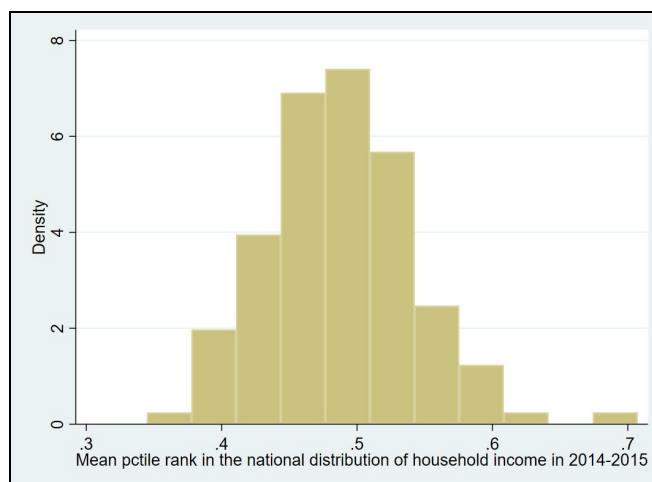
Figure 4: Histogram of the mean percentile rank in the national distribution at age 31 to 37 for white children with parents at the 25th percentile of the national income distribution for Ocean County, New Jersey. For white children, the distribution of upward mobility is symmetric, with a majority of white children experiencing a mean percentile ranking of the 50th percentile.
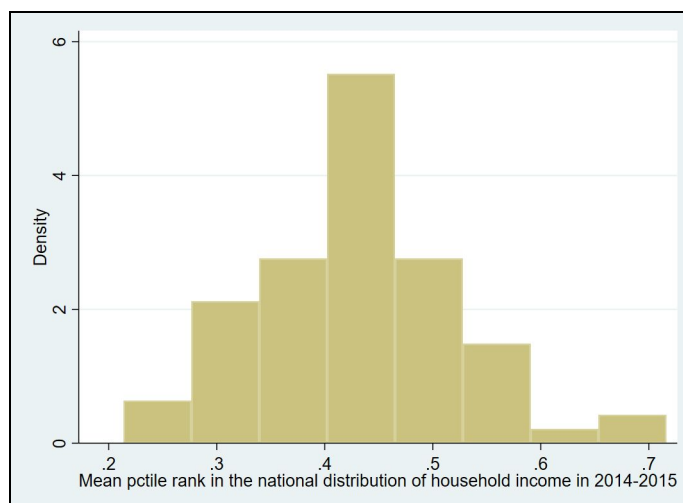
Figure 5: Histogram of the mean percentile rank in the national distribution at age 31 to 37 for hispanic children with parents at the 25th percentile of the national income distribution for Ocean County, New Jersey. For hispanic children, the distribution of upward mobility is symmetric and bell shaped, with a majority of hispanic children experiencing a mean percentile ranking of about the 40th percentile.
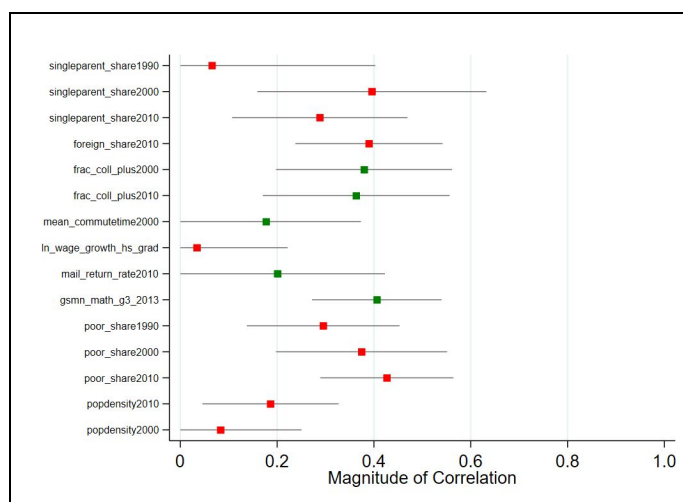

Figure 6: Correlation plot of several parameters against all of the children's upward mobility in Ocean County. The red depicts a negative correlation, while the green depicts the positive correlation. Notice how the largest magnitude of correlation is tied with math test scores, poverty rate, and share of the population born outside the United States. Notice how it is only positively correlated with math scores, Census return rate, mean commute time, and fraction of residents with a college degree or more.
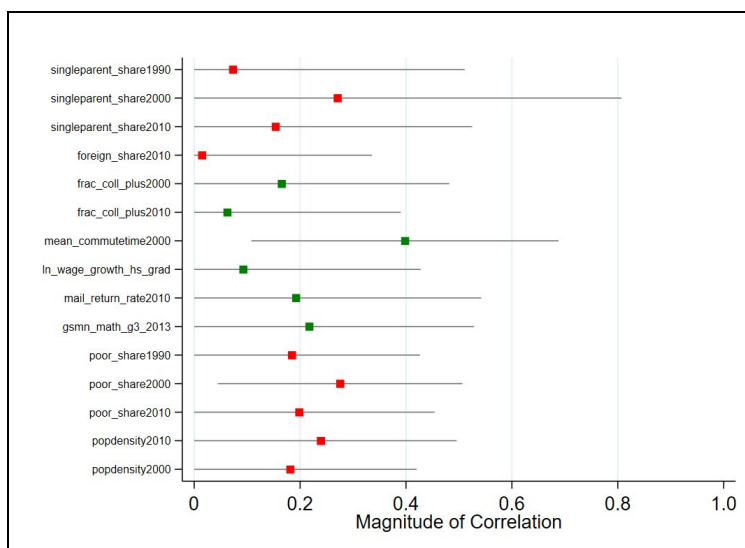
Figure 7: Correlation plot of several parameters against black children's upward mobility in Ocean County. The red depicts a negative correlation, while the green depicts the positive correlation. Notice how the magnitude of correlations are significantly lower than the pooled group, and how they are most correlated with mean commute time.
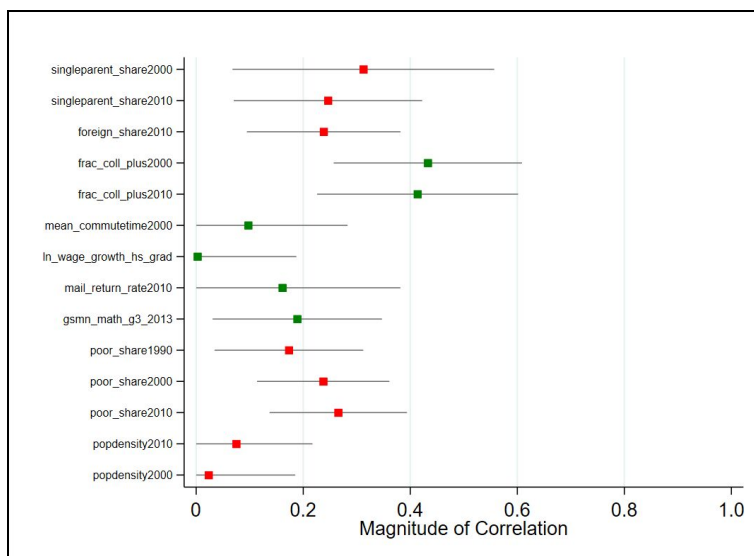

Figure 8: Correlation plot of several parameters against white children's upward mobility in Ocean County. The red depicts a negative correlation, while the green depicts the positive correlation. Notice how the magnitude of correlations are significantly lower than the pooled group. Further, they are positively correlated with fraction of residents with a college degree or more, and it is negatively correlated with share of single-headed households with children.
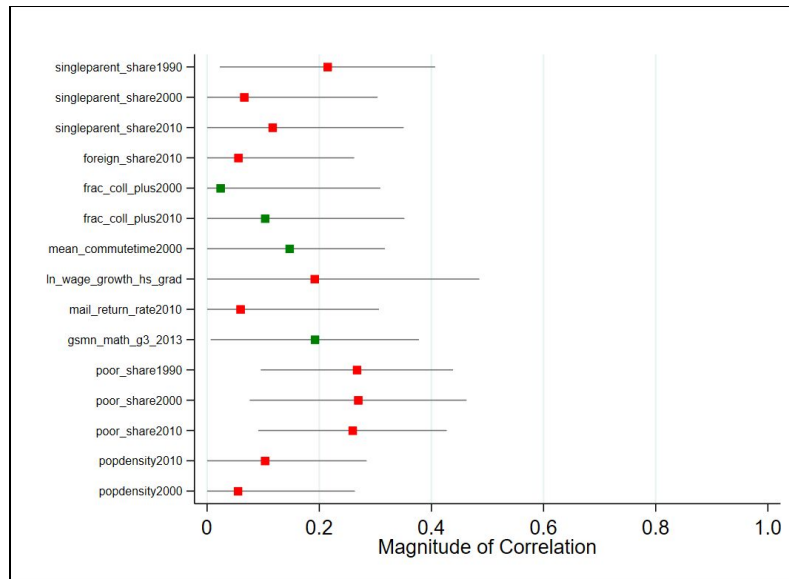
Figure 9: Correlation plot of several parameters against hispanic children's upward mobility in Ocean County. The red depicts a negative correlation, while the green depicts the positive correlation. Notice how the magnitude of correlations are significantly lower than the pooled group. Further, they are negatively correlated with the poverty rates and share of single parent households, and positively correlated with the share of single parent households.
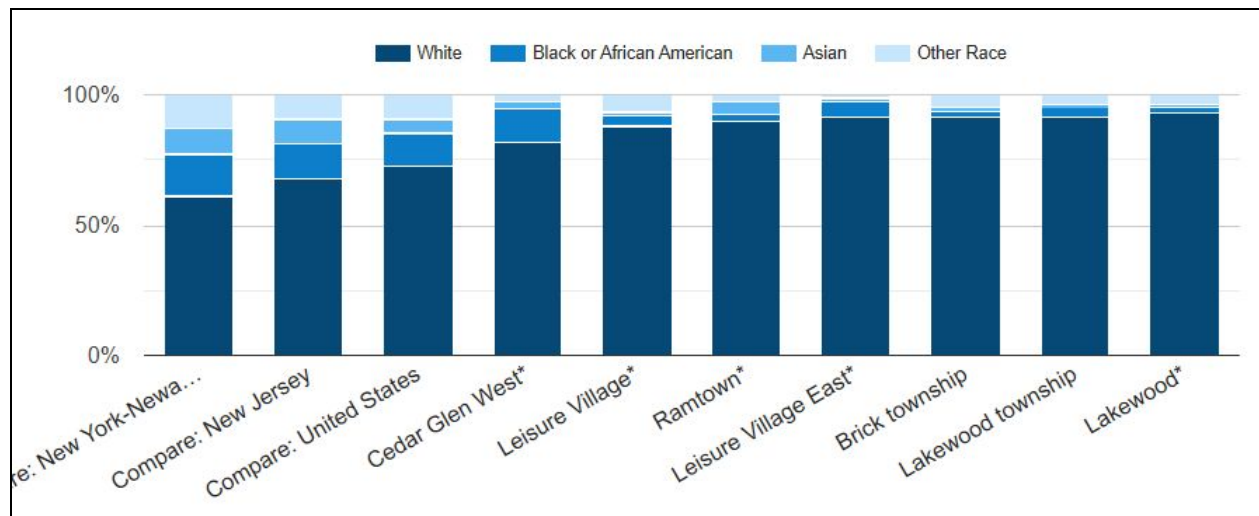

Figure 10: Rough visualization of the racial makeup of some of the larger towns in New Jersey. Lakewood was ranked as one of the highest percent of its inhabitants being white (Towncharts, 2020).