Median Household Income & Educational Attainment in San Diego County Census Tracts

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Final Project
USP 191
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Where is “median household income”?

Median Household Income scaled to the census tract in the original data.

Originally I planned to scale median household income to enrollment boundaries for high schools, but realizing that this would have been arbitrary without CAASSPP data (see “Data and Learning Process” section), I instead shifted my lens to the census tract.

What’s “educational attainment”?

1. % of population who completed only high school
2. % of population completed college, master’s, or doctorate degree
Why this topic?
Well, some of the popular dialogue around the issue looks like this...

Are grades and test scores only a function of skill/effort?

Do class & race have a role in grades and test scores?
Significance

Perhaps this is an overly simplistic view of “the system” that is involved in college admissions.

This section is redacted to protect the privacy of the case study I shared with my professor.

Dear Therapist,

My son is in the middle of the college-application process. He has very good grades and very good SAT and ACT scores; he is an Eagle Scout and a captain of the cross-country team. He is also white, male, and upper-middle-class—and that is the problem.

According to all of the statistics and reports, he should be accepted at Ivy League schools, but he has not been. He will eventually get into a “good” school, but it is my guess (based on what we are seeing with his peer group) that he will be overqualified for the school he ends up at.

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He is very frustrated and very upset. How do you explain to a bright, eager boy that the system is rigged against him? For example, his twin brother, who has similar grades and an almost identical résumé, is going to the U.S. Naval Academy, and his application process, though difficult, was smooth and straightforward.

Lisa
Mendham, NJ

Whether Lisa is right or wrong has policy implications.

● Should affirmative action scale down as income gaps close?
● Should affirmative action exist at all?
● Should we directly address poverty instead?

This project is intended to look at one facet of this complex issue. Does household income influence educational attainment?
I found my data aggregated on the “SimplyAnalytics” website, which the UCSD library has a license to access. All the data is from the 2019 American Community Survey. Precision is thus in question, but as this project intends to look at trends, I trusted what I saw.

Originally I planned on examining this data by scaling it to the enrollment boundaries of San Diego high schools. However, because income can be a signal of any number of factors which more directly influence educational attainment (e.g., access to more educated role models in higher income strata), I chose to move my analysis away from the enrollment boundary level.

Moreover, markers of school performance such as the CAASSPP had critical pieces missing in their .csv files, to protect student privacy. Without data on the performance of the schools serving in an enrollment boundary, use of that boundary as a unit of analysis seemed arbitrary.
Tracts with higher income levels are concentrated around the coast, with tracts progressively becoming poorer as the geography moves inland. Will this inland/coastal divide in income be reflected in educational attainment?
The coastal/inland divide seen with income holds for percentage of population attending college or greater. People who attended college or grad school are concentrated in coastal settlements.

The trend is reversed when looking at the percentage of people who completed only high school. In this case, high school completion (with no college attendance) is concentrated in inland areas, and tapers off towards the coast.
What Does This Suggest? Conclusions.

Not only are college-going residents concentrated in coastal settlements, with a lower proportion present the further inland one goes, but it seems that residents of San Diego County who completed only high school have a lower presence on the coast.
Bucket List

- Perform this same analysis with data from a full census year, rather than 2019, which only had data from the American Community Survey.
- Do a similar project that looks at factors which income differences may be a signal for, such as property tax revenue.
- Learn how to apply statistical methods to GIS analysis. Would correlations in these factors be statistically significant?
- Cosmetically touch up this project. I imagine this information could be useful for Lisa. She might be more willing to listen with a prettier map.
- Analyze mobility. Do people on coast who don’t go to college leave?