

## LIMITATIONS OF THE DATA

## These estimates of upward mobility are based on the outcomes of children born between 1978-83. Why? Are they still relevant for kids growing up in my neighborhood today?

By necessity, any analysis of upward income mobility must be based on historical data, because one must wait until children grow up to see their earnings. We have found that it is necessary to wait until people are in their mid-30s to get reliable estimates of their earnings, which is why the children represented by the Atlas grew up in the late 80s and 90s.

However, we find in our accompanying <u>research paper</u> that places that produced good outcomes in the past typically tend to produce good outcomes a decade later. Moreover, historical outcome data prove to be much better predictors of outcomes than more recent data on poverty rates or test scores. Our estimates are thus highly informative predictors of economic opportunity even for children today. Where this may not be the case, a quick way to check the robustness of estimates in the area you are looking at is to compare patterns in the "Median Household Income" characteristic in 1990 versus 2012-2016. Furthermore, as always, insights from the Atlas are best when combined with additional analyses and on-the-ground knowledge in areas that have changed substantially.

# There are no low-income families in my neighborhood; yet you have an estimate for how kids from low-income families who grew up there do. How is this possible?

Our estimates are based on a statistical model that relates the actual outcomes of kids who grew up in each area to their parents' income. Suppose we observe individuals in a given tract at middle and high income levels of parent income, but not low levels of parent income. We fit a statistical model (essentially a best-fit line relating kids' actual outcomes to parental incomes) to extrapolate and predict how kids in low-income families would do if they grew up in that area. This extrapolation naturally relies on the validity of the statistical model and hence should be interpreted more cautiously than estimates where we have data on families at the relevant income level directly. For more detail on how we form the predictions, please see the <u>Atlas Methodology</u> page, as well as the "Insufficient data" section below.

#### As I'm interpreting the Opportunity Atlas for action, what are some things I should be aware of?

#### Patterns are key

The Opportunity Atlas works best when we are looking to identify patterns across different areas rather than focusing on the characteristics of a single tract.

#### Insufficient data

Most of our outcomes are calculated based on a mathematical model, there may be outliers or imprecision in the estimates. Generally, estimates are more reliable at larger geographies because they are based on more observations in the data. Small geographies, such as Census tracts or even counties,



may sometimes lack sufficient data, especially if you are restricting to specific income levels or racial subgroups. When there is sufficient data, we may not be as confident in an estimate if there were very few children at a particular income level and race that lived in the tract during the relevant time period.

You can get a rough sense of whether there are enough children in the subgroup of interest by using the "Number of Children" measure in the Outcomes section at the top of the menu in the left-hand sidebar on the Opportunity Atlas. In some tracts, there may not be observable children for all sub-groups. However, in many of these tracts we can estimate the potential outcomes based on other children in the area. For example, consider an area with only a well-distributed group of high-income children relative and only few low-income children. Rather than base estimates only on the small sub-group of low-income children, we can use regression analysis to predict the mobility of low-income children by incorporating data that includes high-income children as well.

#### Outliers

We urge caution when interpreting the results of Census tracts that have colleges in them. Many "low income children" that can be observed in these areas are actually low-income college students or the children of parents classified as low income because they were living on graduate student stipends. These factors may overestimate the impact of colleges on the outcomes of low-income children growing up in specific tracts.

To limit the confusion caused by outliers, we recommend that you use the Atlas Advanced Mode tutorial to focus your search on areas where we could observe 50 or more children of a given sub-group.

## COMMON DATA QUESTIONS

#### Are immigrants accounted for in the data?

Our target sample for the Opportunity Atlas consists of all children born between 1978-1983 who were (1) born in the United States or are authorized immigrants who came to the U.S. in childhood and (2) whose parents were also U.S. citizens or authorized immigrants. Our sample does not include children who are unauthorized immigrants or who were claimed as dependents by unauthorized immigrants because we are unable to link them in the tax data because they do not have Social Security Numbers, which is an important component for linking the datasets we use to measure long-term outcomes.

## Do you make adjustments based on cost of living?

We do not make any sort of cost of living adjustments in the Atlas but have studied this in detail in the past. We find that such an adjustment makes very little difference for two reasons:

- We find that cost of living rarely varies that must from place to place. Of course, there are some very notable high cost of living cities (e.g., NYC, SF, LA, etc.) but for the most part, cost of living does not vary that much, especially looking at poorer neighborhoods.
- When we do a cost of living adjustment, we do it for both parents and children. But since
  parents and children tend to live in places with highly correlated costs of living, it tends to cancel
  out. The children may be living in high cost places, which discounts their real earnings, but then



the parents also tended to live in high cost places, so the real background of the child was poorer. Upward mobility is fundamentally about the difference between the children's outcomes and the parents earnings, so one tends to end up roughly back in the same place as before the cost of living adjustment.

#### Do you make adjustments based on inflation?

We adjust all dollar values for inflation to make them comparable across time. We use the consumer price index (CPI-U) to report amounts in 2015 dollars (the most recent year included in our data).

#### What is the difference between a Census tract, county, and commuting zone (CZ)?

The Opportunity Atlas reports outcomes at the Census tract, county, and CZ levels for all outcomes we are able to observe.

A Census tract is a small geographic unit defined by the U.S. Census Bureau. Approximately 4,000 people live in a given Census tract, with populations ranging from 1,200-8,000 people depending on neighborhood density. The boundaries are relatively stable but they do change over time.

County boundaries are determined at the state level and have legal and jurisdictional authority. In some states, these are referred to as parishes, boroughs, or Census areas.

Commuting zones are defined by the U.S. Department of Agriculture. They combine counties to more closely reflect the ties between employers and the labor supply.

#### What is the difference between an outcome and a neighborhood characteristic?

The Atlas includes two major groups of data. The first are the adulthood outcomes of children born between 1978 and 1983. The other are present-day characteristics of neighborhoods. Because the Atlas is designed to report the outcomes of children by the neighborhoods in which they grew up, it can be easy to confuse an outcome with a neighborhood characteristic. Outcomes give you a sense of how children who grew up in a particular neighborhood fare in adulthood, regardless of where they live today. Neighborhood characteristics are a present-day measure of a neighborhood based on who currently lives there, regardless of if they grew up in that neighborhood.

#### How many individuals typically live in a Census tract?

On average, about 4,000 people live in a given Census tract, with populations ranging from 1,200 – 8,000 people depending on neighborhood density. As we are focused only on children born between 1978-83 who grew up in each tract, our tract-level outcomes for all children rely on an average of about 500 children, with individual tract populations ranging from 150-1000. Estimates specific to a particular race and gender rely on an average of about 130 children, with tract populations within demographic groups ranging from 20-1000.



#### How do these data differ from existing data on poverty and inequality in neighborhoods?

Traditional measures of poverty and neighborhood conditions provide snapshots of income and other variables for residents in an area at a given point in time. But to study how economic *opportunity* varies across neighborhoods, we really need to follow people over many years and see how one's outcomes depend upon family circumstances and where on grew up. The Opportunity Atlas is the first dataset that provides such longitudinal information at a detailed neighborhood level. Using the Atlas, you can see not just where the rich and poor currently live – which was possible in previously available data from the Census Bureau – but whether children in a given area tend to grow up to become rich of poor. This focus on mobility out of poverty across generations allows us to trace the roots of outcomes such as poverty and incarceration back to where kids grew up, potentially permitting much more effective interventions.

## QUESTIONS ABOUT THE ATLAS

## Why do many metro areas look like a solid color on the national map, but appear more varied when you zoom in to look at individual neighborhoods?

When viewing the Atlas at a very zoomed-out level, we present estimates at the level of the metro area (specifically, by Commuting Zone). As you zoom in, the Atlas displays estimates at the county and then the Census tract level. So, when the map is zoomed-out to a national scale it essentially displays city-wide averages. Since there are usually high- and low-opportunity areas *within* every city – one of the key findings of this new research – the tract-level estimates show much more nuance.

## RACIAL AND GENDER DISPARITIES

# Why do black boys have lower rates of upward mobility than white boys in 99 percent of Census tracts in the country?

When filtering outcomes by race on the Opportunity Atlas, we can see that black-white disparities exist in virtually all regions and neighborhoods across the US but is particularly stark between black and white men. Both black and white boys have better outcomes in neighborhoods commonly perceived to be "good" areas: Census tracts with low poverty rates, high test scores, and a large fraction of college graduates. However, black-white gaps are larger on average for boys who grow up in such tracts. This is because white children benefit more from growing up in such areas than black children do.

When wondering why, let's explore what the research shows us. In low-poverty neighborhoods, two types of factors are most strongly associated with better outcomes for black men and smaller black-white gaps: low levels of racial bias among whites and high rates of father presence among blacks. Black men who grow up in tracts with less racial bias among whites – measured by testing for implicit bias or explicit racial animus in Google searches – earn more and are less likely to be incarcerated.

Higher rates of father presence among low-income black households are associated with better outcomes for black boys but are uncorrelated with the outcomes of black girls and white boys. Black father presence at the neighborhood level predicts black boys' outcomes whether or not their own father is present, suggesting that what matters is not parental marital status itself, but rather



community-level factors associated with the presence of fathers, such as role-model effects or changes in social norms.

Growing up in a high-income family provides no insulation from these disparities. Black men have much higher rates of downward mobility than other groups. Black men born to parents in the top income quintile are almost as likely to fall to the bottom quintile as they are to remain in the top quintile. By contrast, white men born in the top quintile are nearly five times as likely to stay there as they are to fall to the bottom. Black men who move to better areas – such as those with low poverty rates, low racial bias, and higher father presence – earlier in their childhood have higher incomes and lower rates of incarceration as adults. These findings show that environmental conditions during childhood have causal effects on racial disparities, demonstrating that the black-white income gap is not immutable. Differences in rates of mobility out of and into poverty are a central driver of racial disparities in the U.S. today. Reducing the black-white gap will require efforts that increase upward mobility and decrease downward mobility for black Americans, especially black men.

## I understand that majority of disparities are driven by the gap between the outcomes of black men and white men. What about women's outcomes?

Our research shows that the intergenerational black-white income gap is entirely driven by differences in men's, not women's, outcomes. Black men grow up to earn substantially less than white men. In contrast, while white women earn more than black women overall, black women earn slightly *more* than white women conditional on parent income. Moreover, there is little or no gaps in wage rates or hours of work between black and white women.

We find similar gender differences in other outcomes: black-white gaps in high school completion rates, college attendance rates, and incarceration are all substantially larger for men than for women. Black women have higher college attendance rates than white *men*, conditional on parent income. For men, the gap in incarceration is particularly stark: 21 percent of black men born to the lowest income families are incarcerated on a given day, far higher than for any other subgroup.