

Does sprawl matter for social mobility?

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In their landmark [study of income mobility](#) in America last year, Harvard economist Raj Chetty and colleagues suggested that a child's chances of moving up in the world might be partly connected to the geography of the region where she grows up -- or, more specifically, to the degree of sprawl there. This provocative idea, one of many raised by the [Equality of Opportunity study](#), snagged the attention of [Paul Krugman \(multiple times\)](#)

It seemed to hint that the [American dream of low-density suburban development](#) -- a vast lawn for every family -- was actually holding some Americans back. Children in racially and economically segregated sprawling metropolitan areas where jobs are far-flung and hard to access seemed to fare particularly poorly. To take this idea even further, as some did, perhaps this means sprawl has been [part of the problem in Detroit](#). Chetty and his co-authors at Harvard and UC Berkeley used a fairly straight-forward proxy for their measure of "sprawl," an otherwise amorphous idea. Among [their findings](#):

Areas with larger black populations tend to be more segregated by income and race, which could affect both white and black low-income individuals adversely. Indeed, we find a strong negative correlation between standard measures of racial and income segregation and upward mobility. Moreover, we also find that upward mobility is higher in cities with less sprawl, as measured by commute times to work.

There is a separate strand of research, however, that has been trying to [quantify "sprawl" more precisely](#). As the word is used in popular culture, it generally falls into the unscientific category of "I know it when I see it," from the window of a passing car or over the wing of an airplane. Sprawl occurs in those places with big-box stores, with endless ranch homes, with this iconically American kind of development (to borrow from a Northern Virginia sample I often ponder on flights into DCA):



Google Satellite

Sprawl, though, can be more objectively measured by the density of census tracts, by the extent to which houses are located near jobs, by how quickly population density declines from the center of a city, by the density of street intersections or the size of average blocks. Add together all of those factors -- and more -- and it's possible to create a measure of sprawl that more accurately enables us to compare metropolitan areas to each other, and to look at how "sprawl" itself relates to other outcomes for the people who live there.

Reid Ewing, now at the [University of Utah's Metropolitan Research Center](#), has been doing this work for more than a decade. And now, along with Shima Hamidi, he's completed [an updated version](#) of a sprawl index that marries all of this analysis with the findings on social mobility from Chetty et al. Ewing's latest study, an update to a 2002

methodology on measuring sprawl, was prepared for the National Institutes of Health, the Ford Foundation and the advocacy group [Smart Growth America](#).

Ewing and Hamidi combine all of those quantifiable measures above (and several more) to assess and rank 221 metro areas and 994 counties in America on their level of sprawl. Among the largest Metropolitan Statistical Areas, New York and San Francisco rank as the most compact (or least sprawling). The Hickory, North Carolina and Atlanta regions rank the worst. The Washington/Arlington/Alexandria division ranks surprisingly poorly, at 91st out of these 221 metro areas. But that geographic unit extends far into Virginia (encompassing 16 counties and that satellite image above). Comparing individual counties, the District of Columbia ranks sixth.

The full rankings will provide a useful dataset for other researchers. But the biggest value of this new study lies in the analysis of that index alongside measures of health and economic well-being -- and alongside the newly available Harvard data on social mobility.

On this last front, Ewing and Hamidi take Chetty's observation of a relationship between sprawl and income mobility much deeper. More compact metro areas, they conclude, do in fact have higher income mobility. For every 10 percent increase in the sprawl index score (higher scores mean more compact development), they find a 4.1 percent increase in the probability that a child born to a family in the bottom fifth of the income distribution reaches the top fifth by the age of 30 (this is the metric Chetty used).

For example, relatively sprawling Baton Rouge, Louisiana, has a sprawl index score of 55.6 (100 is the national average, meaning metros scored higher are more compact and those scored lower are more sprawling). A child there has a 7.2 percent chance of moving from the bottom to top income quintile there. Madison, Wisconsin, ranks among the most compact regions (136.7). Children there have a 10.2 percent chance of making that leap.

The full technical paper identifies several other associations of significant interest to urban planners and public health officials (and the NIH). Controlling for socioeconomic differences, obesity is less prevalent in more compact, connected metro regions (where it's presumably easier to walk around), and the people who live there have longer life expectancies.

They also spend less money on their [combined housing and transportation costs](#).

Families often have to make a tradeoff between these two expenses: As people move

farther out of the city in search of cheaper housing, their transportation costs frequently increase, negating some of those affordability benefits. But this study found that as metros grow more compact, transportation costs decline faster than housing costs rise. The relationship between transportation costs and sprawl is more clearly causal (the farther you have to commute, the more you spend on gas). The relationship between sprawl and social mobility is much murkier, even as this study tries to address the link with a more sophisticated assessment of what "sprawl" means than the earlier Chetty study. Ewing and Hamidi write, however, that they can envision at least four "plausible causal pathways" between sprawl and upward mobility. This is the most obvious: It is reasonable to assume that sprawl, as we have defined it (low-density, single-use, uncentered development) exacerbates the mismatch of workers and jobs and results in unemployment of low-skill workers.

They also suggest that social capital may play a role, if the strength of social connections and community engagement are depressed by sprawl (both pushing people apart and forcing them to divert social time into solo time in their cars). They also propose that sprawl may impact economic mobility through racial and income segregation, which further reduce exposure to good schools and access to jobs for low-income families. Clearly we'll need much more research to further tease out the nature of these connections. But this latest study reaffirms that it's worth further investigating how the development of the communities that we create influences the chances for economic advancement of the people who live there.



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