

# Upward Mobility/ Access to Opportunity

The Key to the Prosperity of the Region

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Department of City & Metropolitan Planning  
University of Utah





# DEFINITIONS

## Upward Mobility

### Intergenerational

The sense of doing better than your parents

### Intragenerational

The ability of an individual of progressing throughout their working age years (15-64)

## Access to Opportunity

***Access to what is needed for:***

Advancement or progress

A high quality of life

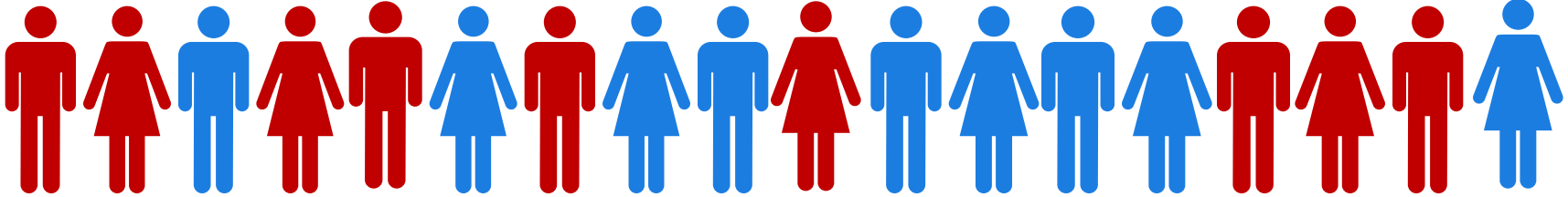
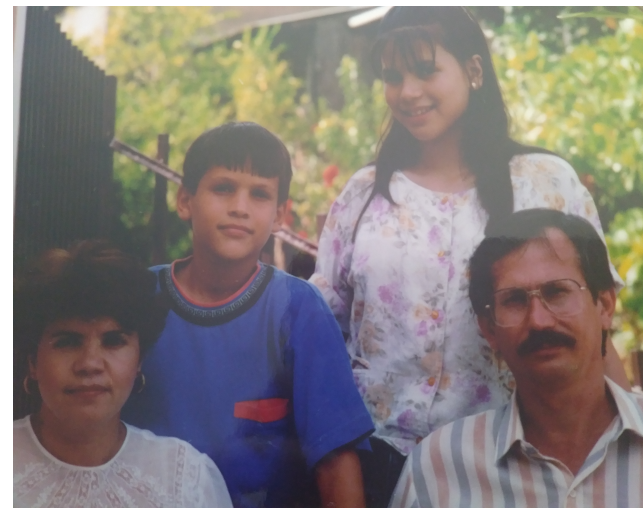






## McNair Scholar

- Stable employment
- Living wage & income
- Homeowners



Opportunity at the  
**Household** Level



# My Neighborhood/Town



## Mixed-income

Public housing  
Market Rate  
Affordable

## Walkable Neighborhood

University  
Trails/ Green Space  
Hospital

**5**minutes



## Diverse Housing types

Single family homes  
Apartments/ Condos  
Townhomes

Supermarket  
Shopping Center  
Central Plaza  
Entertainment

**10**minutes



## Safe

Low-crime  
Low-traffic/speeds



## Engagement

Civic  
Cultural  
Religious  
Political, etc.



**San Germán,  
Puerto Rico**





# Opportunity at Scales

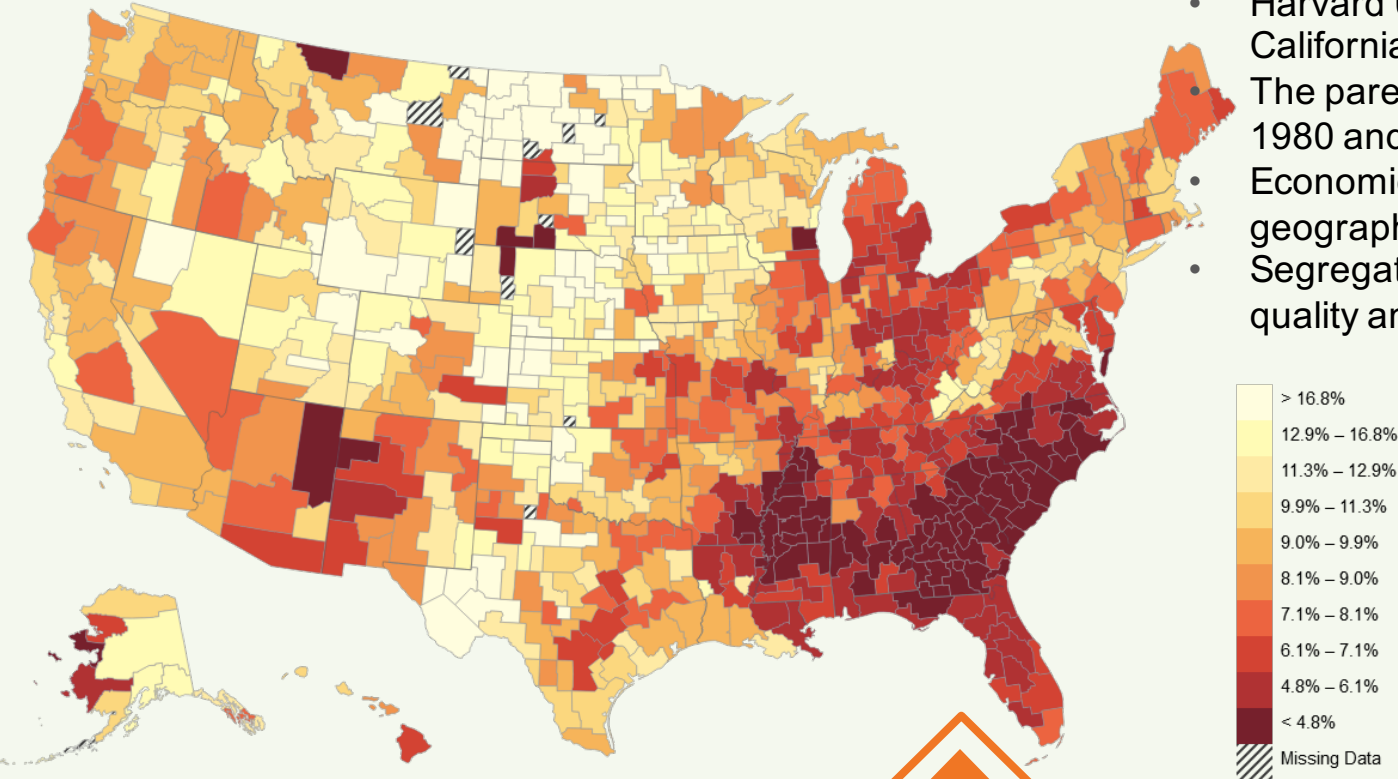




# Equality of Opportunity Index

January 17, 2014

- Harvard University and University of California, Berkeley  
The parents and children born between 1980 and 1982
- Economic mobility varies widely with geographical area.
- Segregation, income inequality, school quality and family structure





# Access to Opportunity Wasatch Front Counties

Produced by James A Wood and DJ Benway

## Access to Opportunity in Wasatch Front Counties

James A. Wood, Director  
DJ Benway, Research Analyst

In February 2011 the U.S. Department of Housing and Urban Development (HUD) awarded a three-year Sustainable Communities Regional Planning Grant to Salt Lake County and a consortium of Wasatch Front agencies.<sup>1</sup> The purpose of the grant was to develop strategies and tools to implement long-term sustainable growth in the Wasatch Front region. The objective of the grant was best expressed by HUD Secretary Shaun Donovan: "Sustainability means creating 'geographies of opportunity,' places that effectively connect people to jobs, quality public schools and other amenities. Today too many families are stuck in neighborhoods

of concentrated poverty and segregation, where one's zip code predicts poor education, employment and even health outcomes. These neighborhoods are not sustainable in their present state."

An important component of the sustainability grant was the development by the Bureau of Economic and Business Research (BEER) of a Fair Housing and Equity Assessment (FHEA). BEER completed an FHEA for each of the four Wasatch Front counties in 2014

following guidelines provided by HUD. As part of the process, an equity analysis was completed that focused on access to opportunities for education, employment, health care and affordable housing.

1. Consortium members included Salt Lake County, Wasatch Front Regional Council, Franklin, Utah, Mountainland Association of Governments, Utah Department of Transportation, Utah Transit

The equity analysis included an opportunity index developed by HUD to quantify the number of important community attributes that influence the ability of an individual, or family, to access and capitalize on opportunity. The opportunity index for both an individual census tract and a city is a composite of five indices and is scored from 1 to 10, with 1 denoting poor access to opportunity and 10 denoting very high access to opportunity. The five indices making up the index were school proficiency, poverty, labor market engagement, housing stability and job access. Within each dimension of the opportunity index there were several

Table 1 Opportunity Dimensions: Variables and Sources	
Dimension	Variable
Poverty Index	Family Poverty Rate Pct. Households Receiving Public Assistance
School Proficiency Index	School Math Proficiency/State Math Proficiency School Reading Proficiency/State Reading Proficiency
Labor Market Engagement	Unemployment Rate Labor Force Participation Rate
Job Access Index	Pct. with a Bachelor's Degree or higher Tract-level Job Counts Tract-level Job-Worker Counts Origin-Destination Flow Aggregate Commute Time Tract-to-Tract Average Commute Time
Housing Stability Index	Homeownership Rate Pct. Units Low-Cost (R/F) Pct. Units Low-Cost (New Purchases) Pct. Vacant (Non-Seasonal) Pct. Crowded
See 602	

subcategories to capture various elements of the opportunity dimension. These are summarized in Table 1.

While HUD provided indices only at the census tract level, BEER created an average opportunity score and scores for all opportunity dimensions for each city and county. The HUD composite opportunity index was mapped for the census tracts and cities in the four Wasatch Front counties. For each county the first figure maps the opportunity index score by census tract and the second figure maps the aggregated scores for each city in the county. The census tract map tells a more detailed story of opportunity and shows the areas within a city that lack access to opportunity.

Authors: University of Utah Mountainland Research Center, and the Bureau of Economic and Business Research, University of Utah.



# Opportunity Dimensions & Variables

01

## Poverty Index

*Family poverty rate, % households receiving public assistance*

02

## School Proficiency Index

*School math proficiency/ State math proficiency, School reading proficiency/ State reading proficiency*

03

## Labor Market Engagement

*Unemployment rate, labor force participation rate, % with a bachelor's degree or higher*

04

## Job Access Index

*Tract-level job counts and worker counts, origin-destination flows, aggregate commute time*

05

## Housing Stability Index

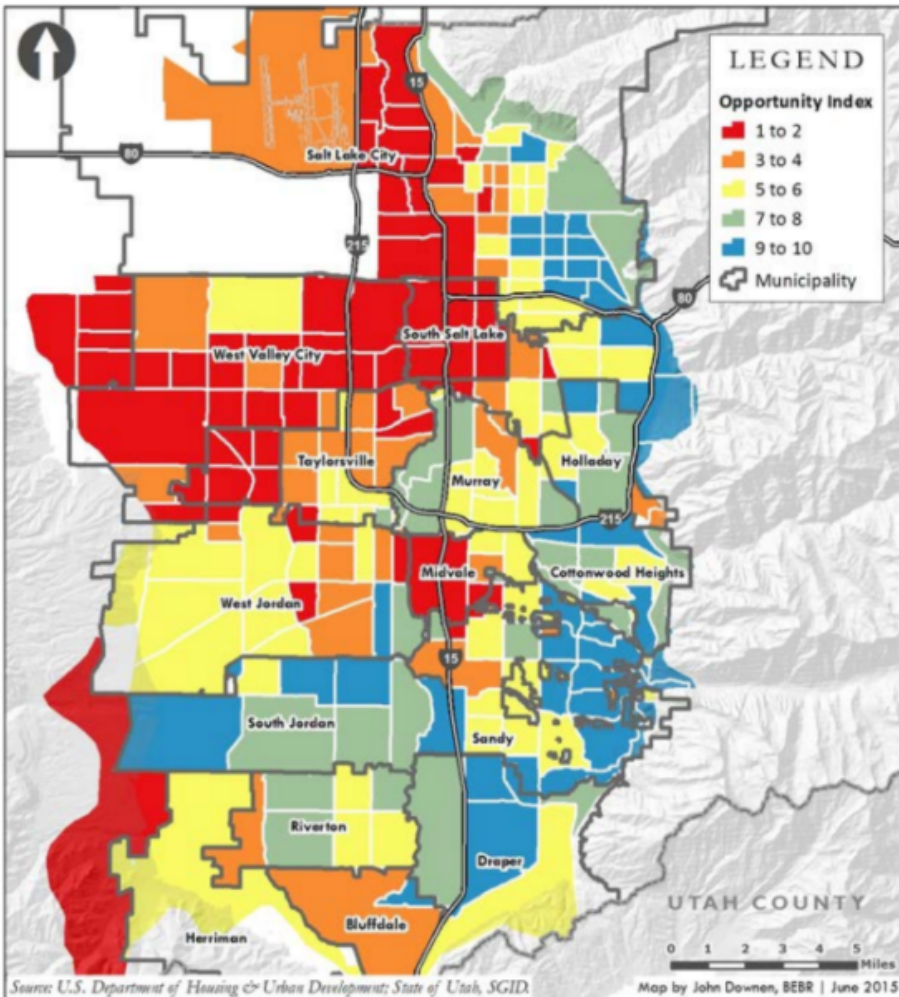
*Homeownership rate, % loans low-cost (re-fi and new purchases), % vacant, and % crowded*

Source: HUD

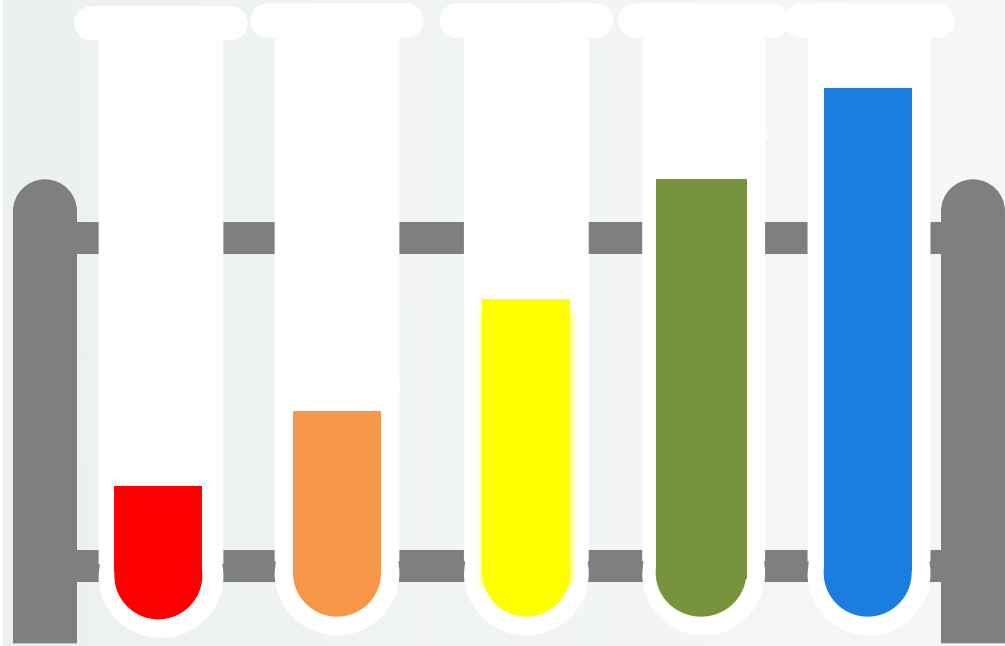


## Opportunity Index by Census Tract in Salt Lake County

(1–2 opportunity poor to 9–10 opportunity rich)



# Opportunity Index





# Socioeconomic Change of Salt Lake City, 1970-2010

Produced by Ivis Garcia and Jordan Baker

Report available at:  
<https://www.westsidestudioslc.com/neighborhood-change>

The Socioeconomic Change of Salt Lake  
City Community Council Districts  
1970-2010

NEIGHBORHOOD CHANGE INDEX

METROPOLITAN RESEARCH CENTER | UNIVERSITY OF UTAH







### Create an index

Indicators in the literature associated with neighborhood change. Conversations with advocates.



### Score each neighborhood from 1970-2010

We used the Score each Salt Lake City Community Council District



### Create a typology

Classify neighborhoods as experiencing or not experiencing change. Classify the type of change.



### Calculate changes

You can simply impress your audience and add a unique zing and appeal to your Presentations.



### Apply the typology

You can simply impress your audience and add a unique zing and appeal to your Presentations.





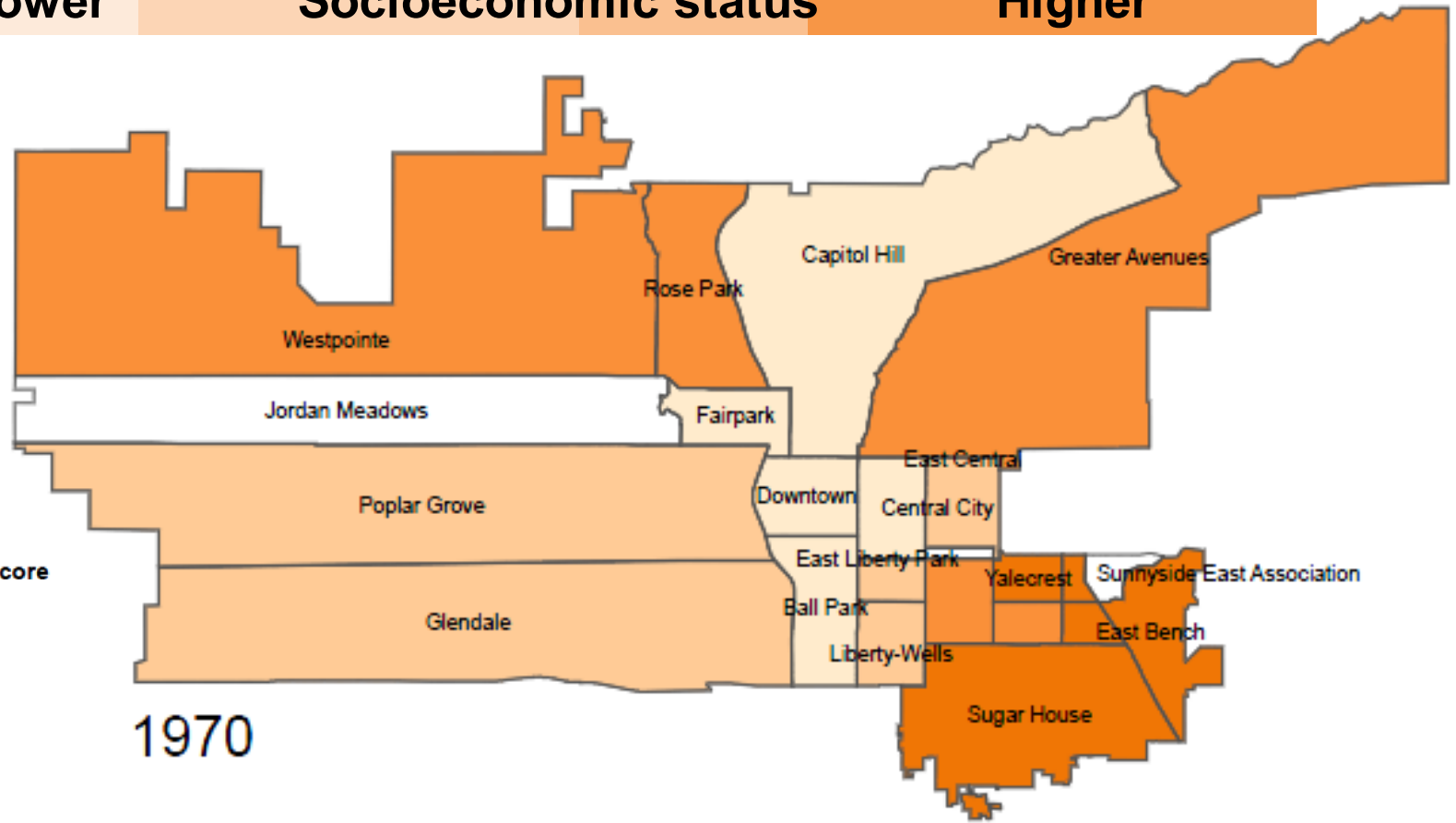
Variables	Above City Average
% White (Non-Hispanic)	+
% College Education (Bachelor's degree or higher)	+
Median Family Income	+
Median Home Value	+
% Owner Occupied	+
% Manager Occupations	+
% Latino	—
% Elderly (Age 65+)	—
% Children (Age 5-19)	—
% Renter Occupied	—
% Persons Below Poverty	—
% Female-headed Households with Children	—
% Family Households	—



Lower

Socioeconomic status

Higher



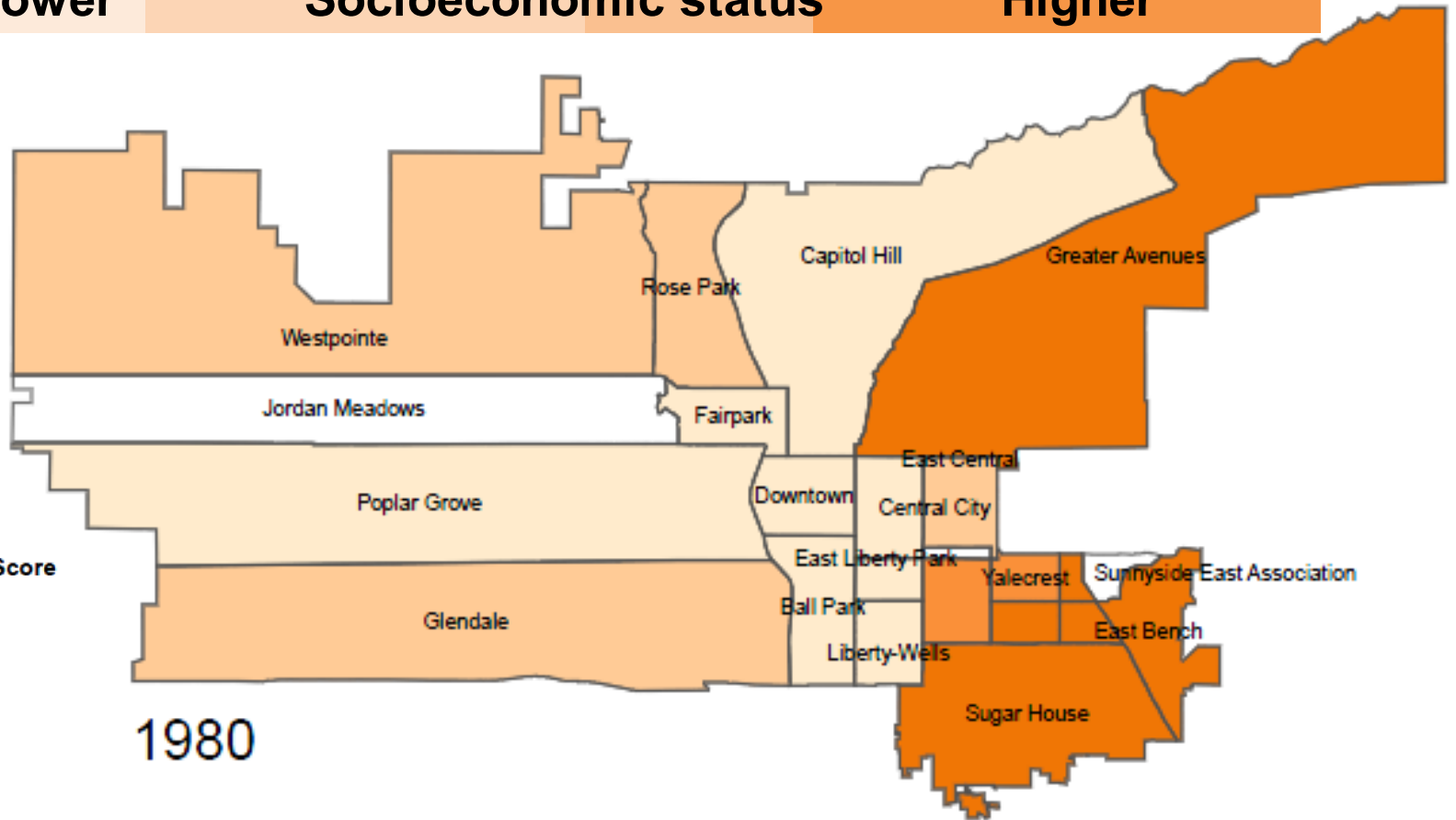
Report available at:  
<https://www.westsidestudioslc.com/neighborhood-change>



Lower

Socioeconomic status

Higher



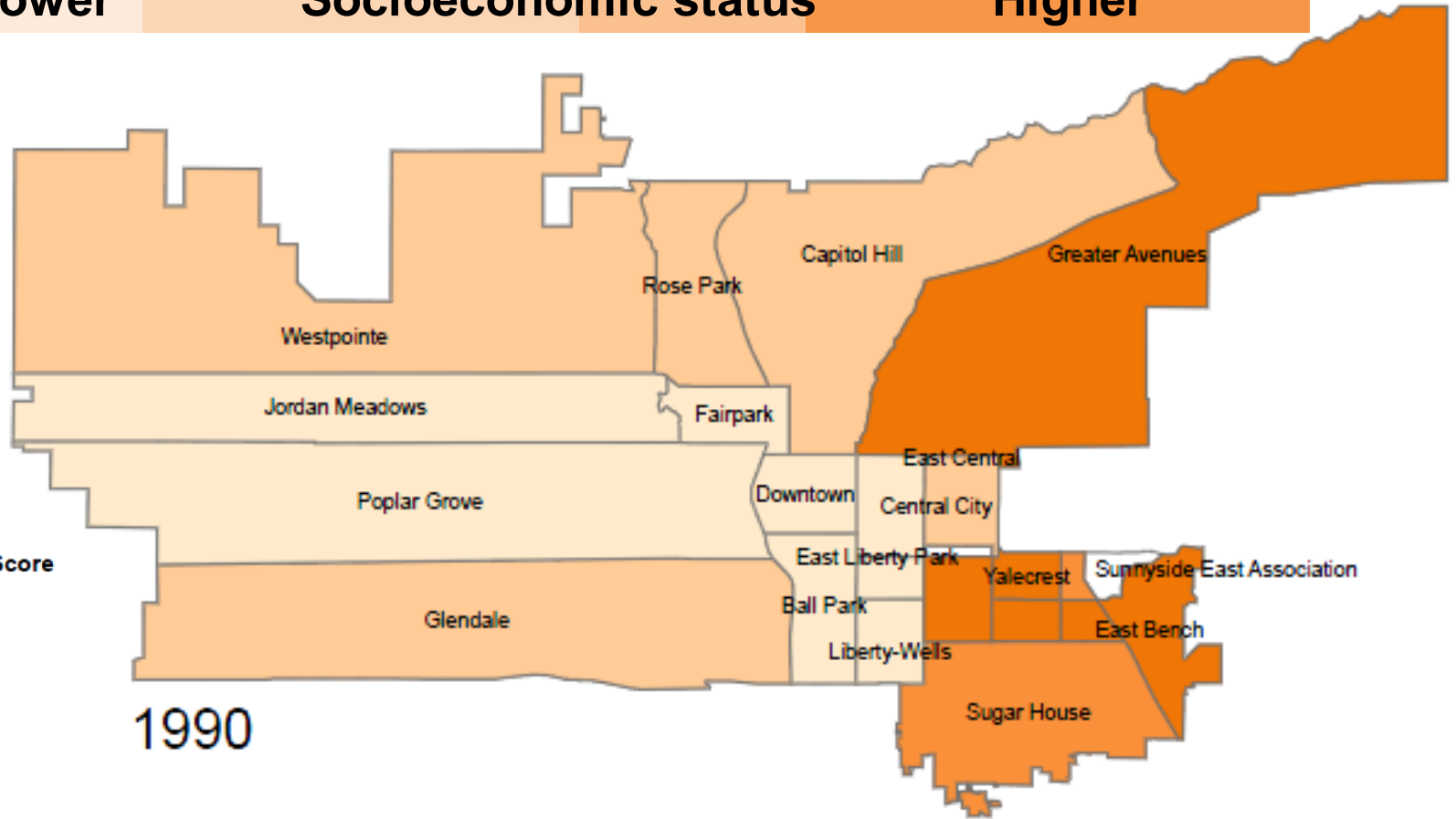
Report available at:  
<https://www.westsidestudioslc.com/neighborhood-change>



Lower

Socioeconomic status

Higher



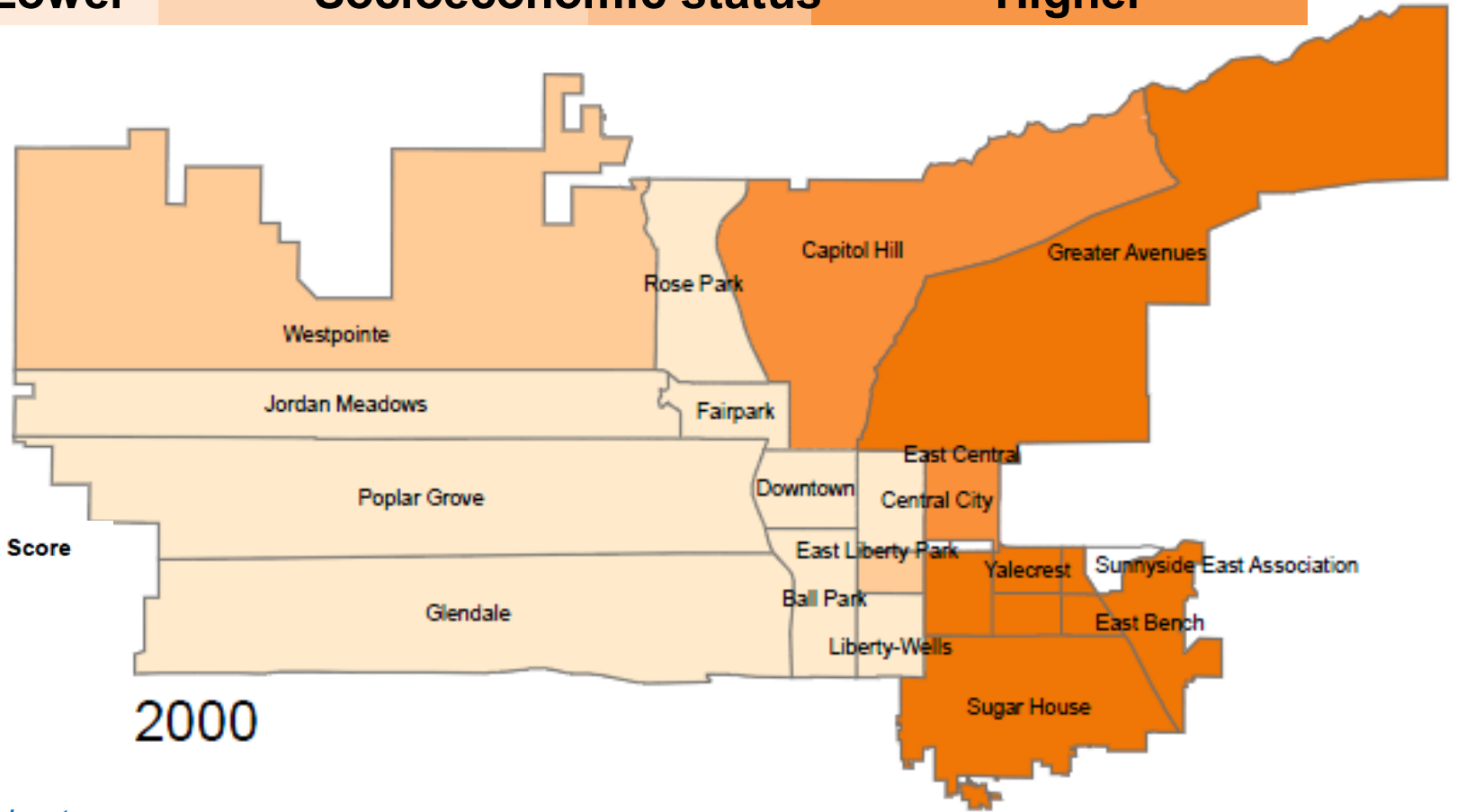
Report available at:  
<https://www.westsidestudioslc.com/neighborhood-change>



Lower

Socioeconomic status

Higher



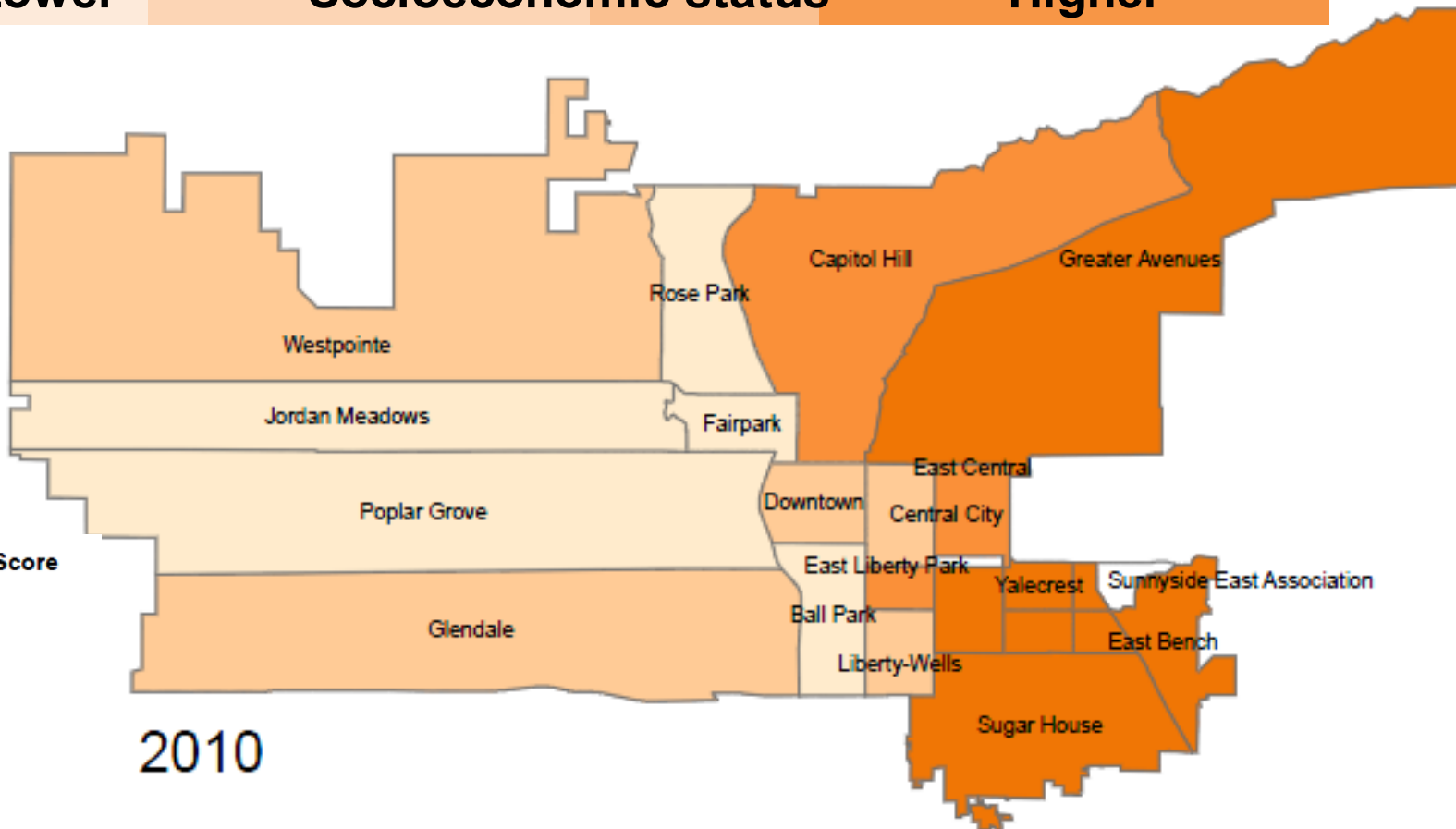
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<https://www.westsidestudioslc.com/neighborhood-change>



Lower

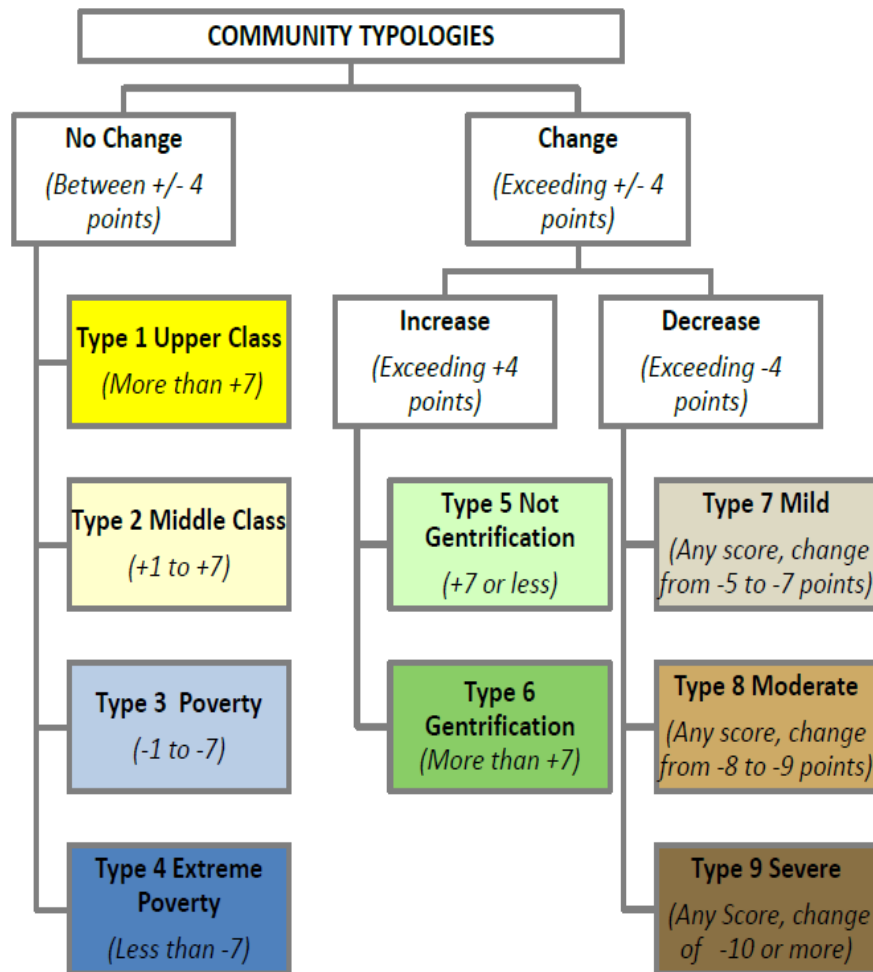
Socioeconomic status

Higher



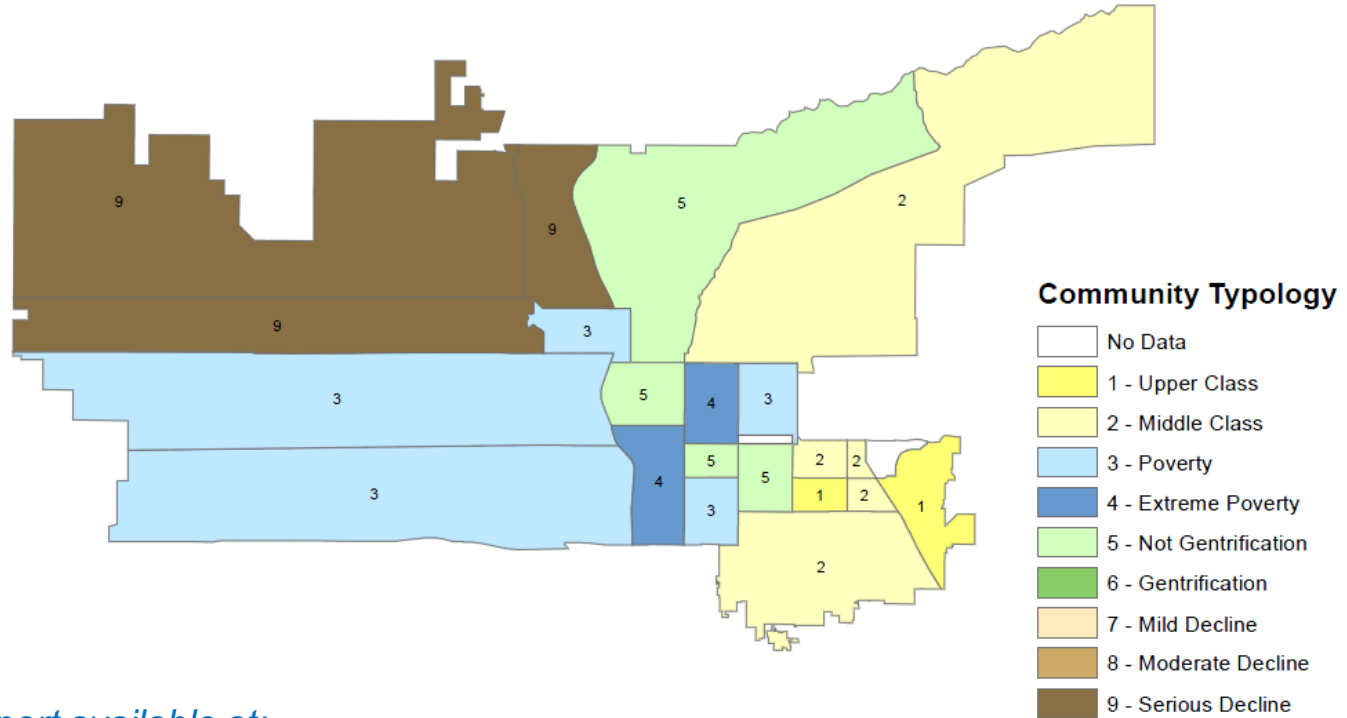
Report available at:  
<https://www.westsidestudioslc.com/neighborhood-change>







# Neighborhood Typologies

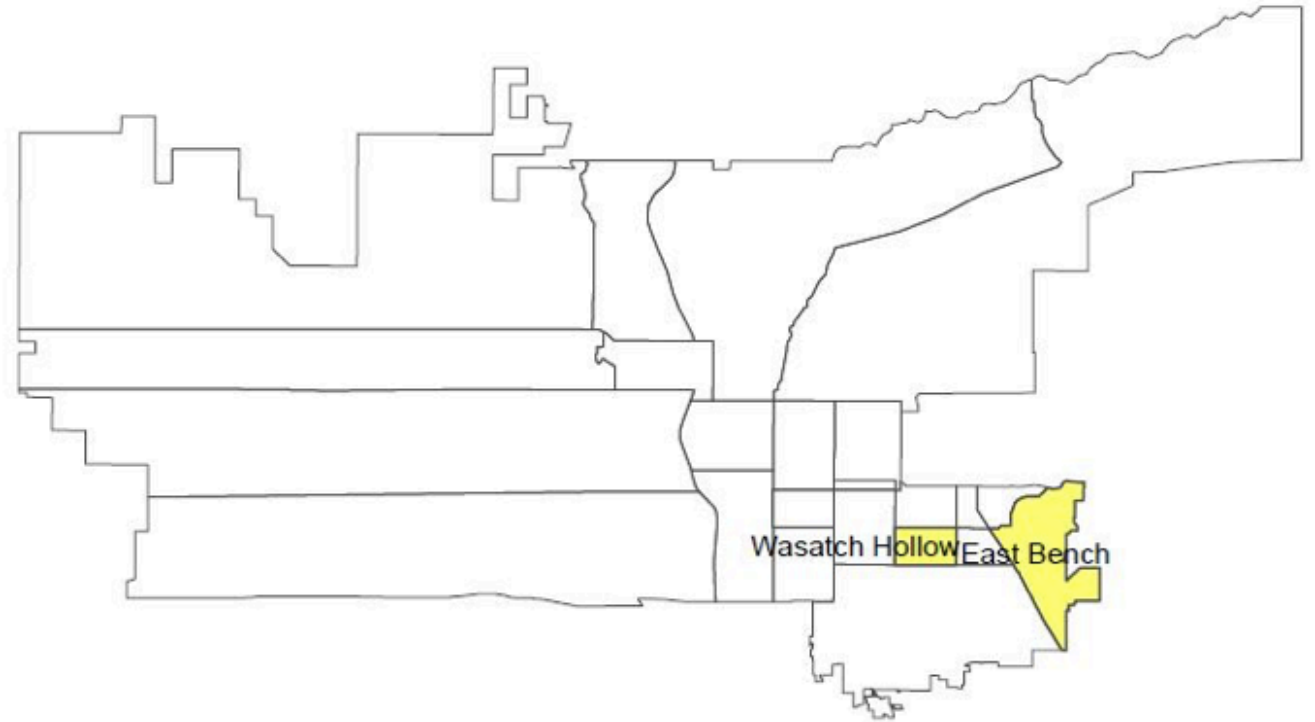


Report available at:

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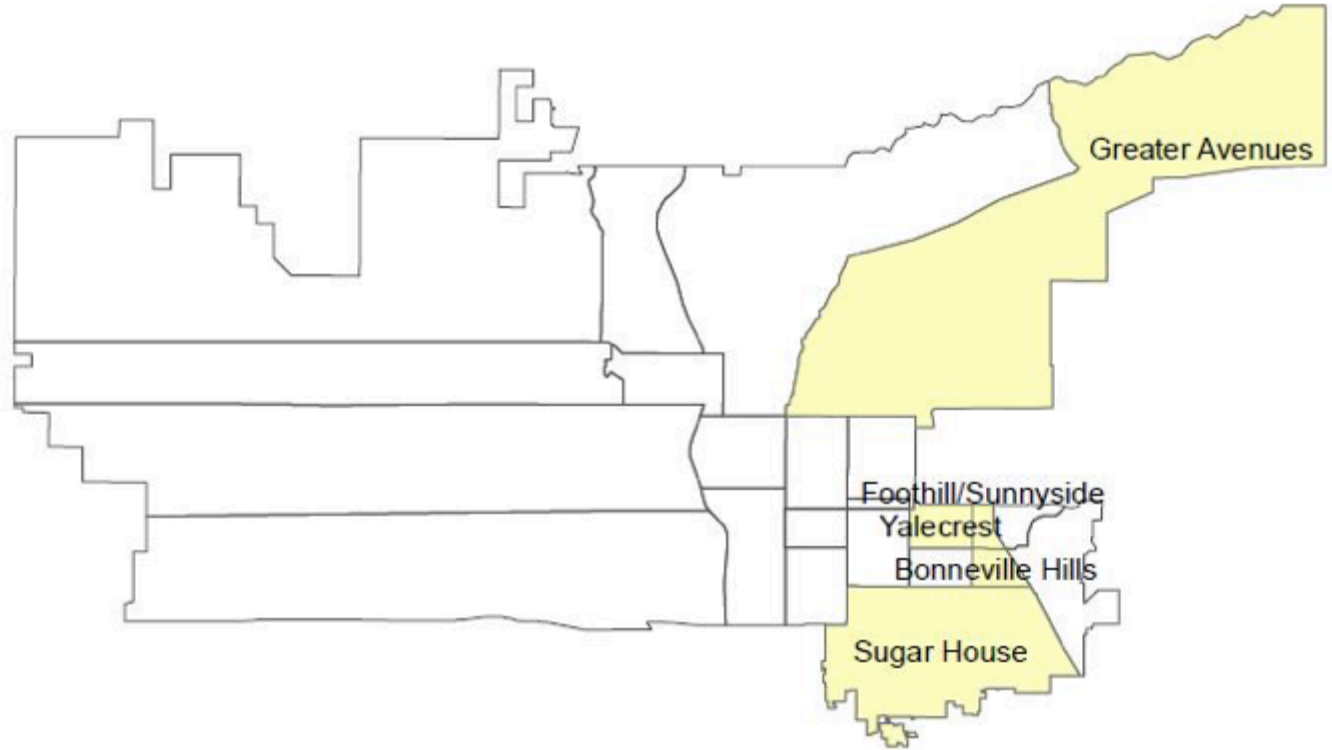
# Upper Class



Report available at:  
<https://www.westsidestudioslc.com/neighborhood-change>



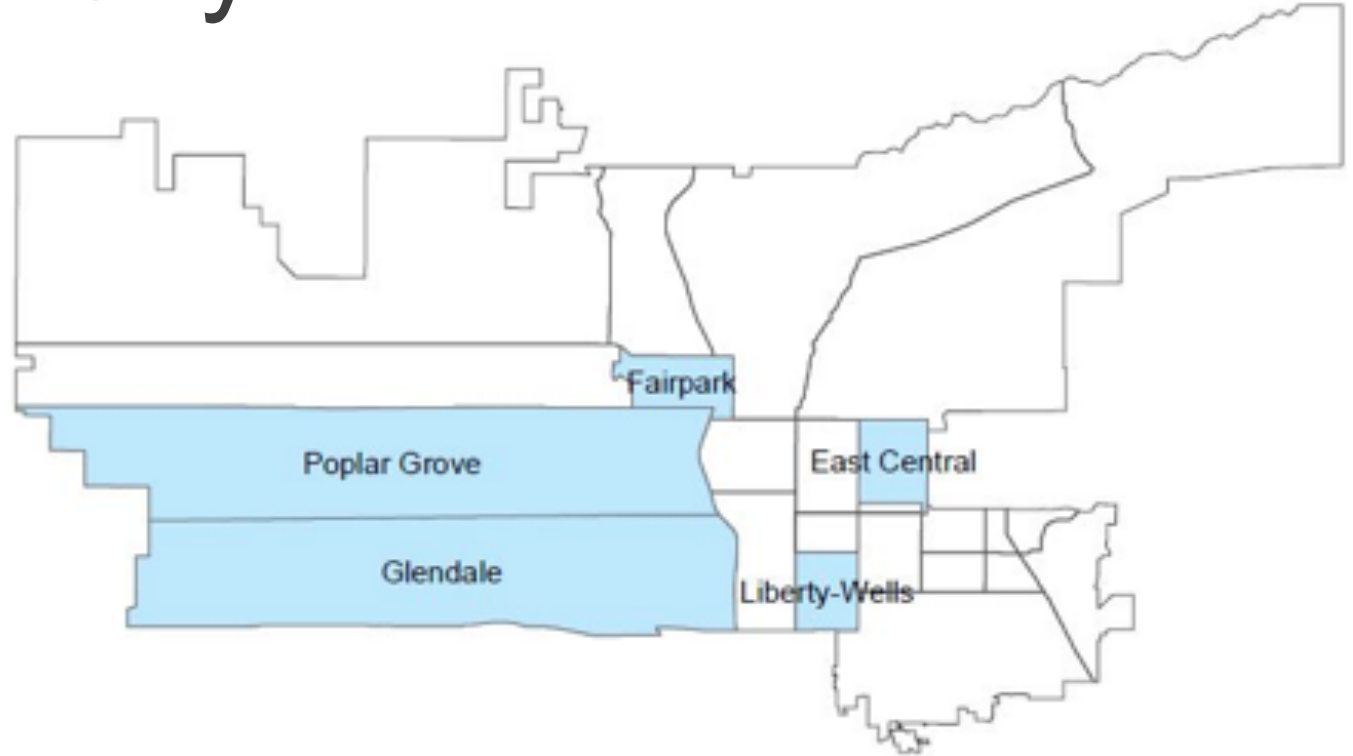
# Middle Class



Report available at:  
<https://www.westsidestudioslc.com/neighborhood-change>



# Poverty

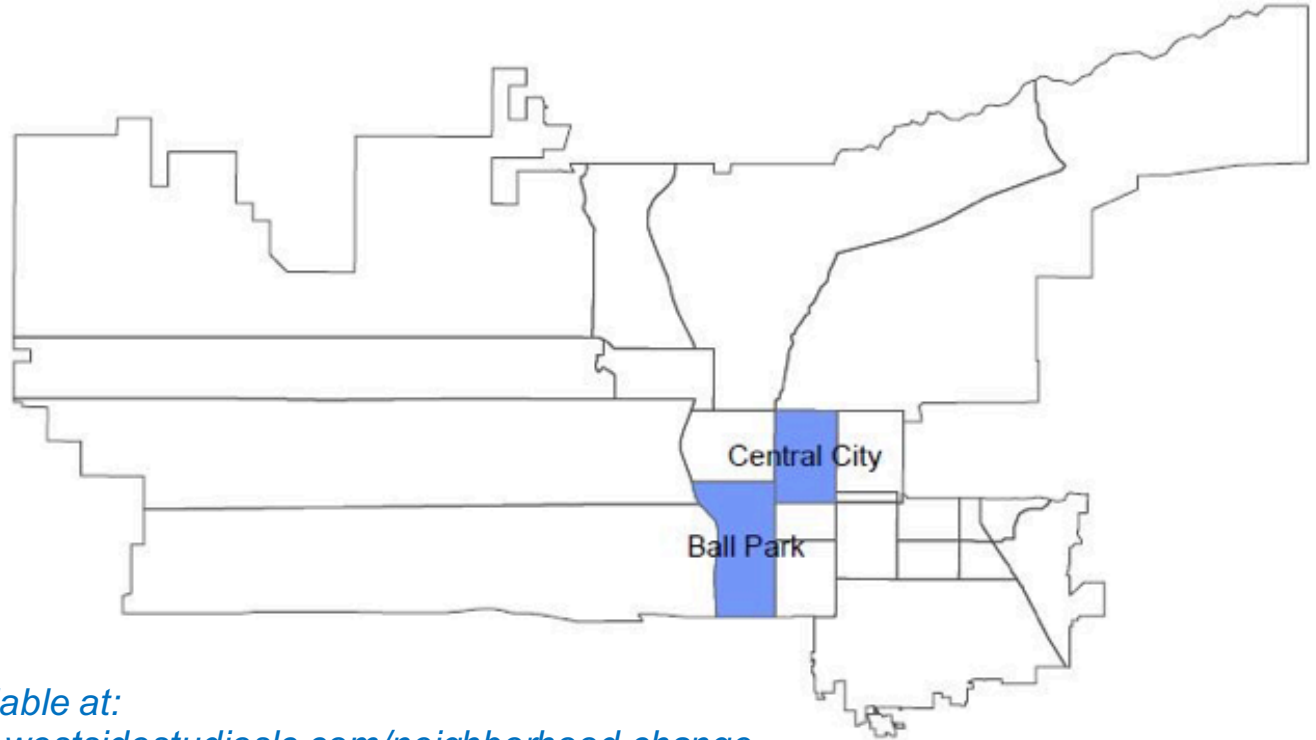


*Report available at:*

*<https://www.westsidestudioslc.com/neighborhood-change>*



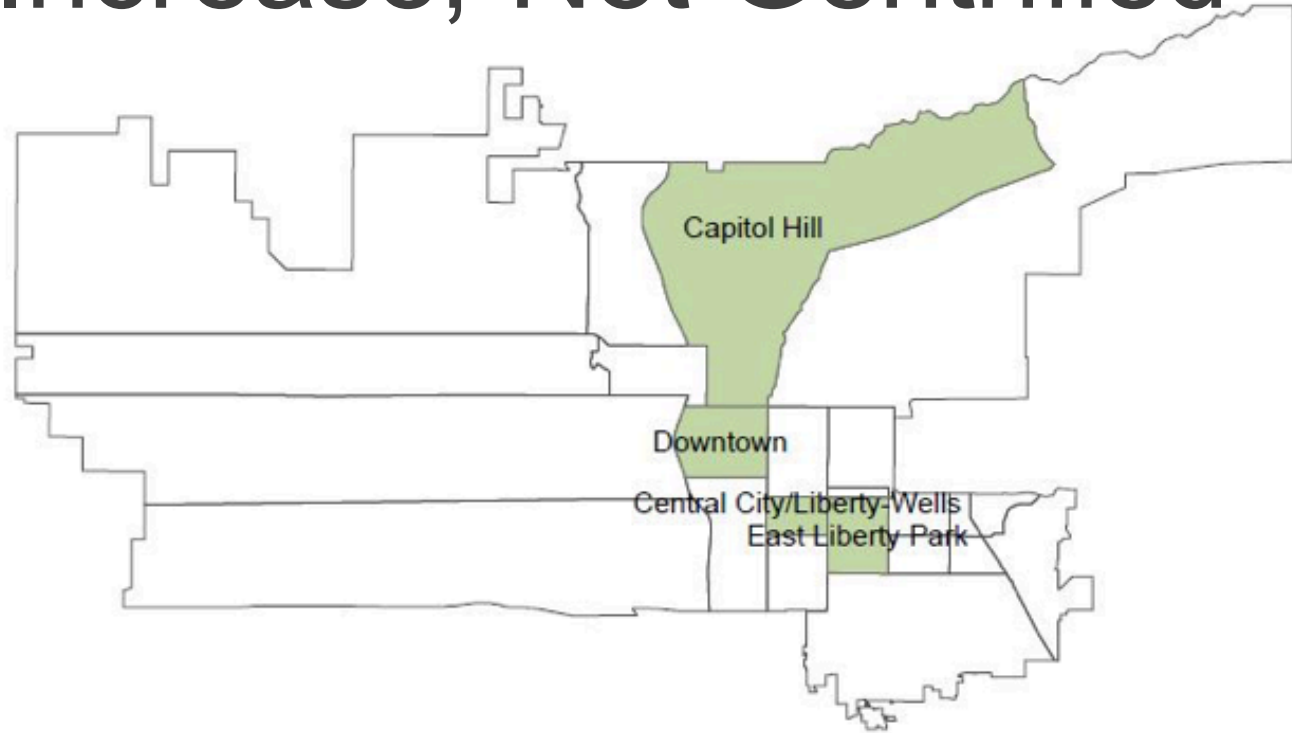
# Extreme Poverty



Report available at:  
<https://www.westsidestudioslc.com/neighborhood-change>



# Increase, Not Gentrified

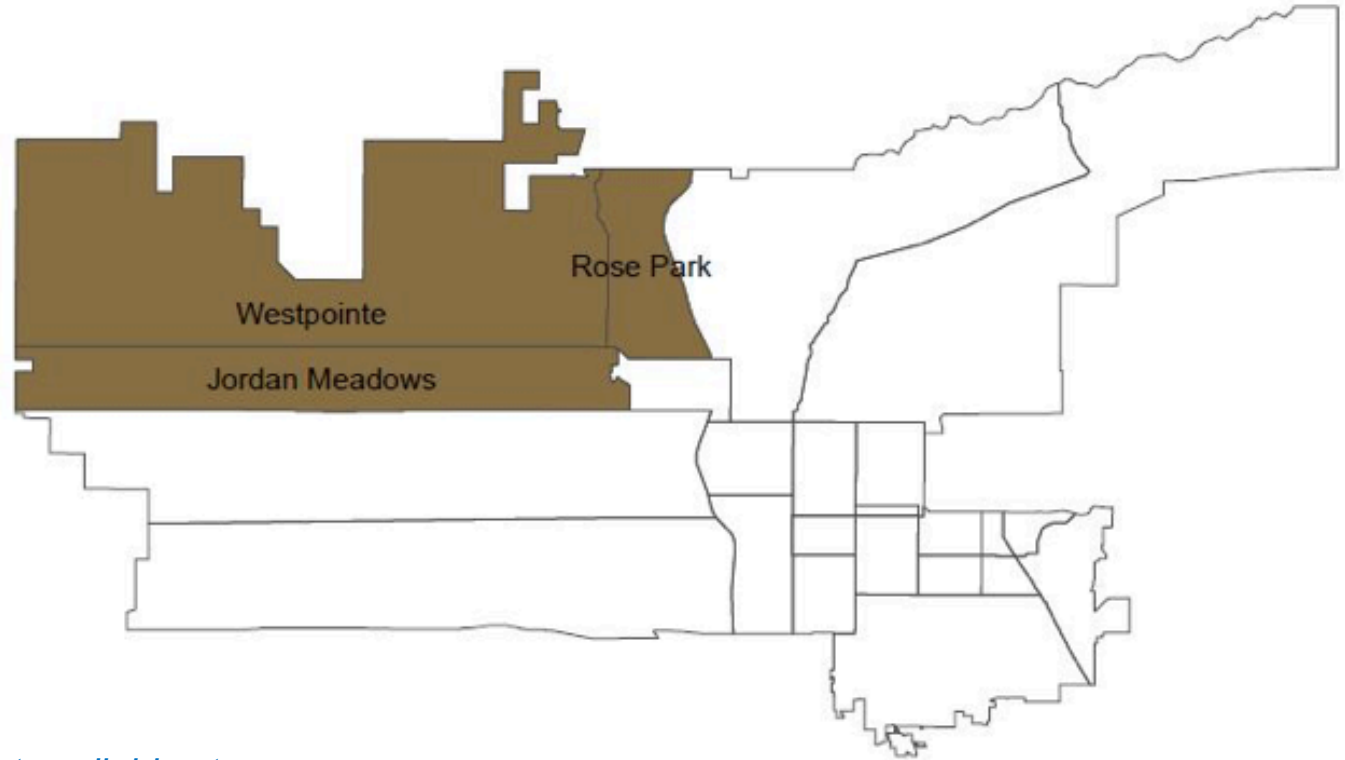


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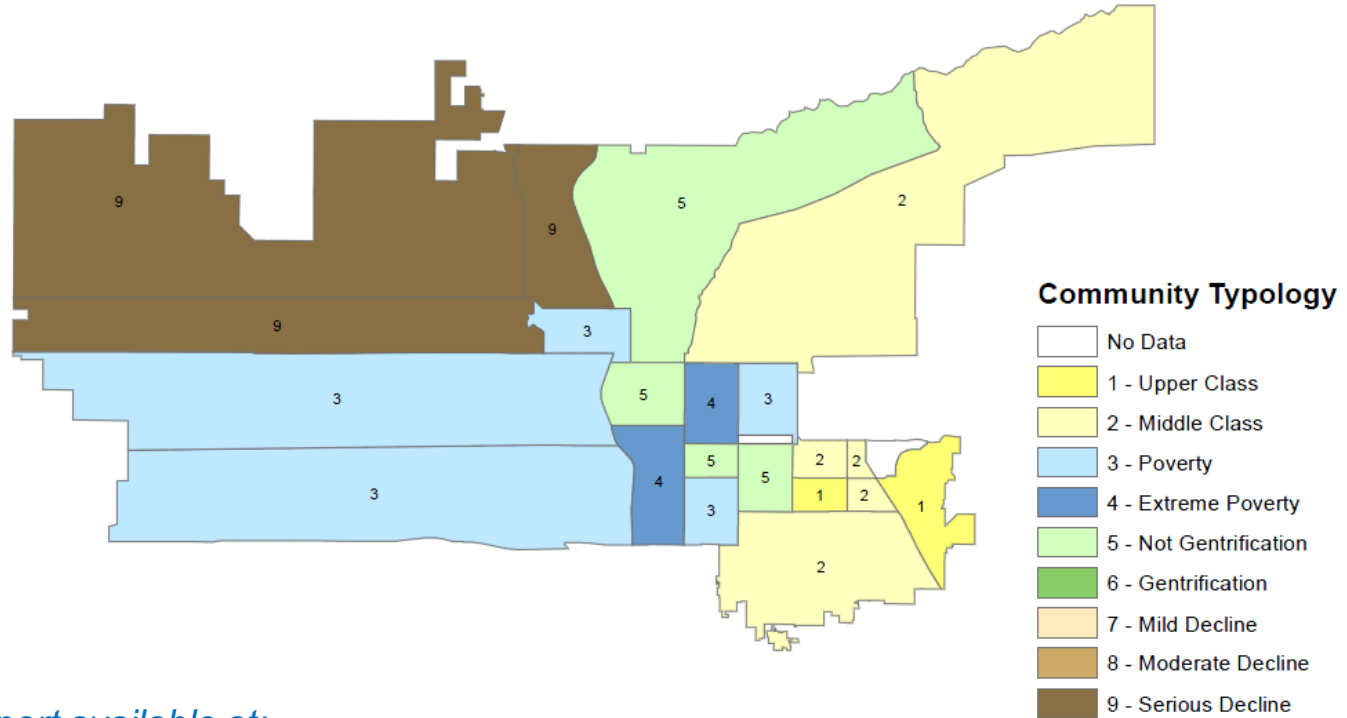
# Severe Decrease



Report available at:  
<https://www.westsidestudioslc.com/neighborhood-change>



# Neighborhood Typologies



Report available at:

<https://www.westsidestudioslc.com/neighborhood-change>



# Opportunity for Whom?



**Young  
People and Adults**  
Employment, education  
and civic engagement

01



**Families,  
Immigrants, and  
Children**  
Housing, education,  
health, and community  
connections

02



**Older Adults**  
Mobility, safety,  
affordable, and  
accessible housing

03



**All**  
Ages  
Races/Ethnicities  
Gender/Sexual orientation  
Ability  
Religious/Political views  
Etc., etc., etc.



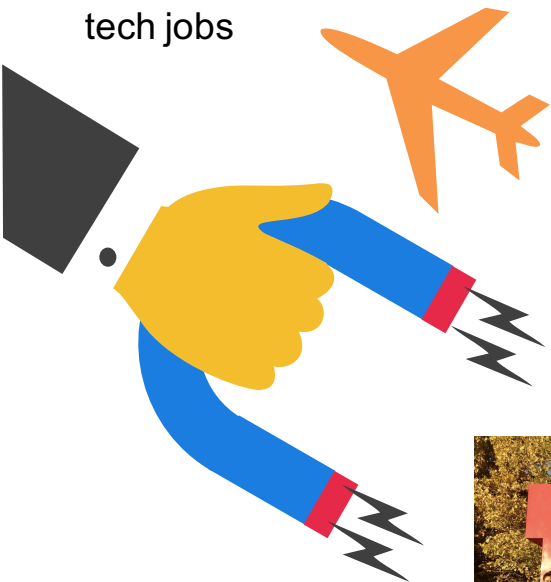
01

Aerospace,  
innovation and  
tech jobs

YOUTH  
WORKS

NeighborWorks®  
SALT LAKE

- Youth ages 14-18
- Male and Female
- Hands-on, pre-employment, and life-skills training
- 1<sup>st</sup> Job
- Construction/ rehabilitation of west side neighborhoods
- Civic engagement
- Balancing work and school

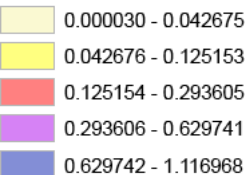




02

## Block Group Evictions Filed

Density\_100m\_sq



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNR Aero, USDA, USDA, USDA, GeoEye, AeroGRID, IGN, GeoEye, GeoEye, and the GIS User Community



# Families Immigrants & Children



COMMUNITY VOICES FOR  
HOUSING EQUALITY





03

# Older Adults

assist  
COMMUNITY DESIGN CENTER



## Safety & Health

Safety Concerns  
Physically Active  
Trails & Rec



## Housing

Accessible  
Affordable



## Mobility

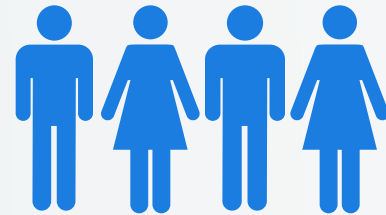
Compensate  
Convenience  
Connectivity







# Invest in People



## Young People and Adults

Education and skills training that fosters economic mobility.



## Families, Immigrants, and Children

Welcome and integrate by providing healthy, affordable, and quality housing as well as education.



Key to **future prosperity** of the region

## Older Adults

Support the health, safety, housing and economic security, and mobility of older adults.



## All People

Ensure broad-based prosperity and a high quality of life for all.







**Community-Based Research  
(CBR) Grant Program**

**(URC) Faculty Research  
& Creative Grant Projects**



**Thank You!**

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# Does urban sprawl hold down upward mobility?

*Reid Ewing, Shima Hamidi, James B. Grace &  
Yehua Dennis Wei*

*Presented by:*

**Reid Ewing**

**Professor & Chair  
City and Metropolitan Planning  
University of Utah  
[ewing@arch.utah.edu](mailto:ewing@arch.utah.edu)**





**To Study Something ...**





2002





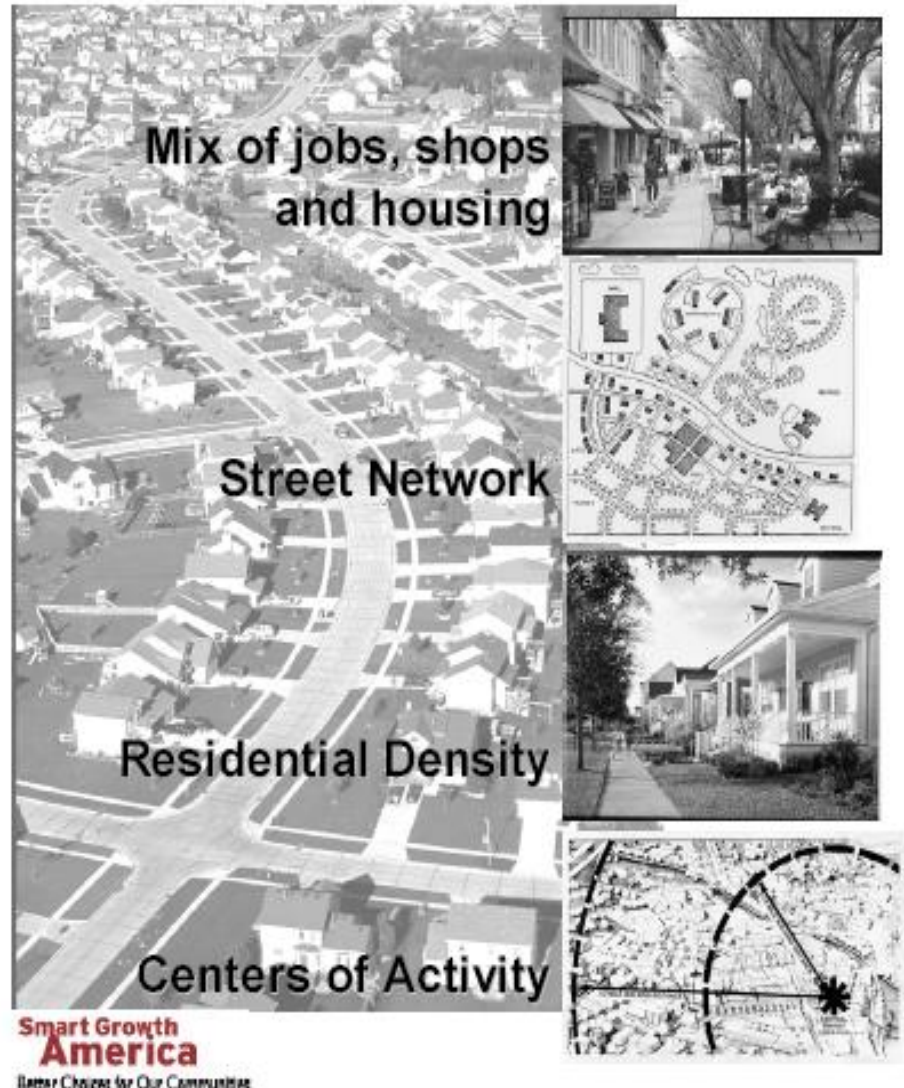
# Measuring Sprawl and Its Impacts

- Low Density
- Segregation of Uses
- Lack of Strong Centers
- Sparse Street Network

Released October 2002

## MEASURING SPRAWL AND ITS IMPACT

Reid Ewing, Rutgers University, Rolf Pendall, Cornell University, Don Chen, Smart Growth America







# 2003





# The Washington Post

FRIDAY, AUGUST 29, 2003

THE WASHINGTON POST

NATIONAL NEWS

DC MD VA R

FRIDAY, AUGUST 29,

## Suburbia USA: Fat of the Land?

Report Links Sprawl, Weight Gain

By ROB STEIN  
Washington Post Staff Writer

Suburban sprawl appears to be contributing to the nation's obesity epidemic, making people less likely to walk and more likely to be overweight, researchers reported yesterday.

In the first comprehensive examination of whether suburbs spreading across the U.S. landscape are affecting Americans' health, the researchers studied more than 200,000 people in 448 counties, producing the first concrete evidence supporting suspicions that sprawl is aggravating the nation's growing weight crisis.

People who live in the most spread-out areas spend fewer minutes each month walking and weigh about six pounds more on average than those who live in the most densely populated places. Probably as a result, they are almost as prone to high blood pressure as cigarette smokers, the researchers found.

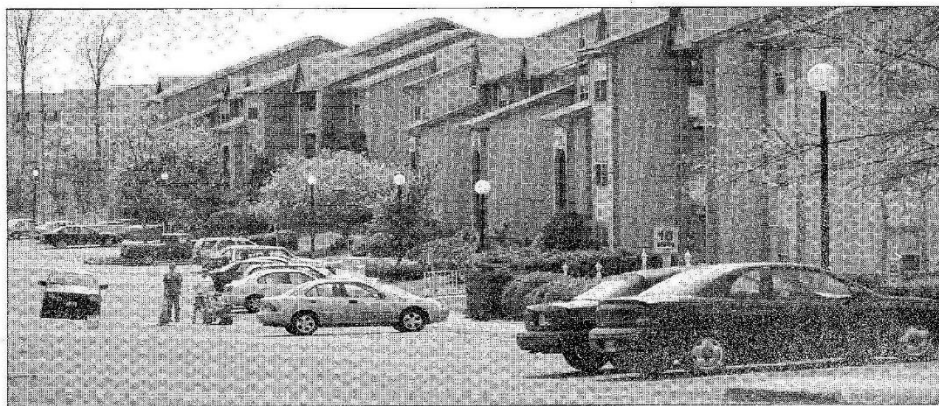
"There are lots of other reasons why we should work to contain sprawl," said Reid Ewing of the University of Maryland's National Center for Smart Growth, who led the

study. "There is a lot of circumstantial evidence that sprawl is related to health," Ewing said in a telephone interview. "This is certainly the first national study to make the direct connection between the built environment and health."

Ewing and his colleagues analyzed data collected about 206,992 U.S. adults between 1998 and 2000 by the Behavioral Risk Factor Surveillance System, an ongoing federal survey. Using data from the Census Bureau and other federal sources about population density, block size, street patterns and other factors, the researchers calculated a "sprawl index" for 448 counties in the largest metropolitan areas nationwide, where two-thirds of the population reside, including the Washington region.

The index ranged from a low of 63 for the most sprawling county—Geauga County, Ohio, just outside Cleveland—to a high of 352 for the densest—New York City.

Frederick County in Maryland,



People who live in the most spread-out areas were found to weigh about six pounds more on average than those in the most densely populated places.

25 densest counties.

People in more sprawling counties are also likely to have a higher body mass index (BMI), a standard measure of weight. A 50-point increase in the degree of sprawl was associated with an average weight gain of a little more than one pound per person, researchers found.

While researchers found no association between sprawl and diabetes or heart disease, they did find that people who live in the least sprawling areas had a 29 percent lower risk of developing high blood pressure than those in the most sprawling areas.

### Sprawl and Obesity

New research links suburban sprawl to obesity. You are more likely to be overweight if you live in an area with low population density and a more expansive street grid.

STATE/COUNTY	The lower the sprawl index score, the greater the amount of sprawl.	More sprawl means you are more likely to have a higher body mass index, ...	... the more you are likely to weigh, ...	... the higher your risk of high blood pressure ...	... a high risk of being obese
	SPRAWL INDEX SCORE	EXPECTED BMI*	EXPECTED WEIGHT**	PERCENT DIFFERENCE FROM AVERAGE RISK	P DIFFERENCE AVE
<b>Maryland</b>					
Anne Arundel	107.75	26.07	166.47	-0.92%	-1
Calvert	90.84	26.13	166.84	1.10	1
Charles	89.72	26.14	166.87		2

on weight, obesity, hypertension and other health factors were gleaned from a continuing phone survey of more than 200,000 adults by the CDC.

The study found that for every 50-point increase in sprawl

at the University of Maryland.

The study also looked at heart disease and diabetes, but didn't find any statistically relevant relationship between sprawl and these diseases.

The study did find that the

Pickens County, S.C. (83.8) 3.5%

Geauga County, Ohio (63.1) 8.1%

Source: Smart Growth America Surface Transportation Policy Project

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# Between 2003 and 2014

**Physical activity, obesity** (Ewing et al, 2003; Kelly-Schwartz et al, 2004; Sturm and Cohen, 2004; Doyle et al, 2006; Fan and Song, 2009; Plantinga and Bernell, 2007; Lee et al, 2009)

**Traffic fatalities** (Ewing et al, 2003)

**Air quality** (Kahn, 2006; Stone et al, 2010; Schweitzer and Zhou, 2010)

**Residential energy use** (Ewing and Rong, 2008)

**Emergency response times** (Trowbridge et al, 2009)

**Teenage driving** (Trowbridge and McDonald, 2008; McDonald and Trowbridge, 2009)

**Social capital** (Kim et al, 2006; Nguyen, 2010)

**Private-vehicle commute distances and times** (Ewing et al, 2003; Zolnik, 2011; Holcombe and Williams, 2012)

• • • • •





# 2014





- **National Press Release:**  
more than 100  
national and  
regional  
newspapers and  
magazines
- **One Book**
- **8 journal articles**



## MEASURING URBAN SPRAWL AND VALIDATING SPRAWL MEASURES

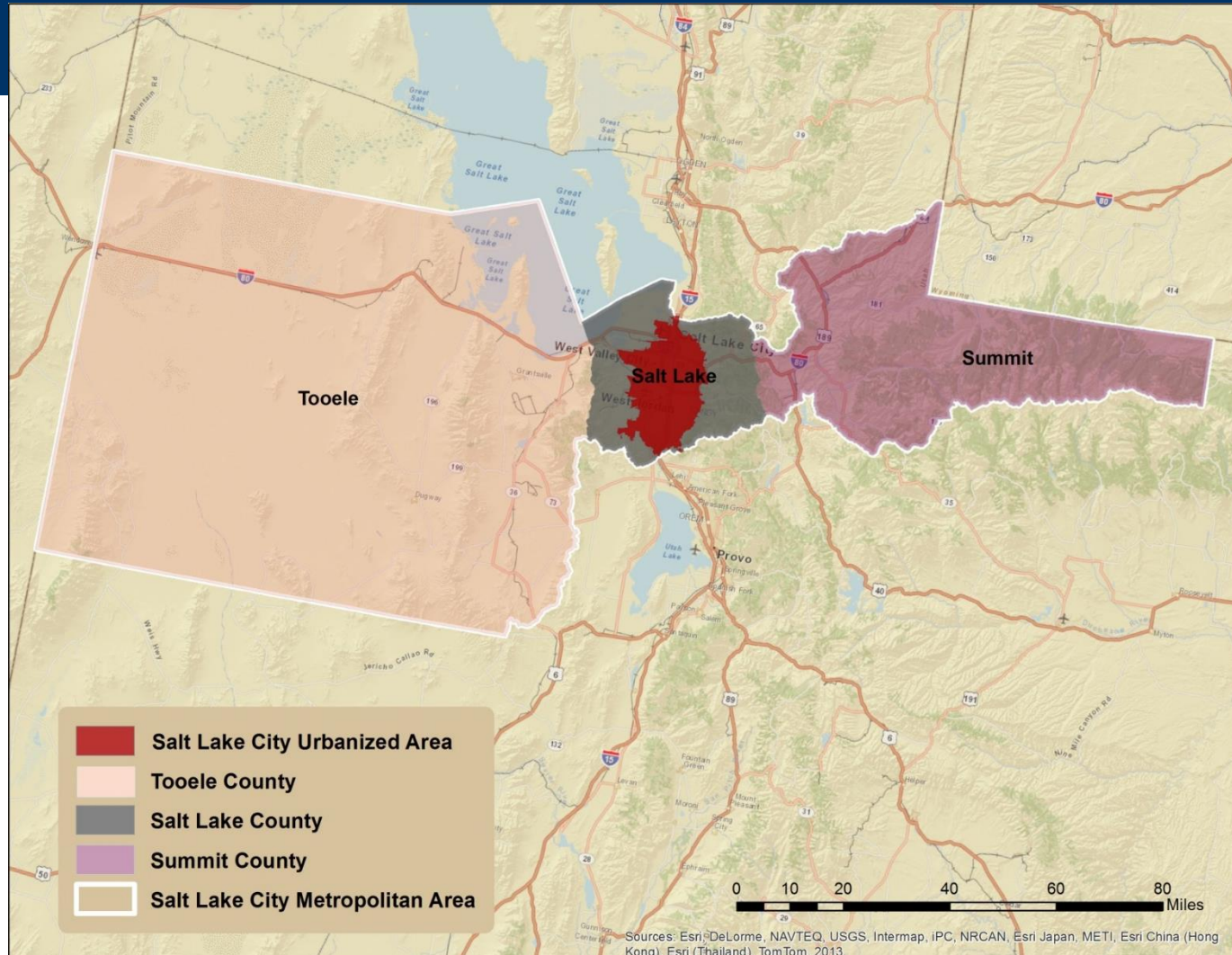
*Reid Ewing and Shima Hamidi*

Prepared for:

National Cancer Institute, National Institutes of Health  
Ford Foundation  
Smart Growth America



# We Have Developed Indices for Counties, Metropolitan Areas, Urbanized Areas, and Census Tracts





# Principal Component Analysis

popden

empden

lt1500

gt12500

urbden

jobpop

jobmix

wlkscore

popcen

empcen

varpop

varemp

smlblk

avgbld

intden

pct4wy

DENSITY

+

MIX USE

+

CENTERING

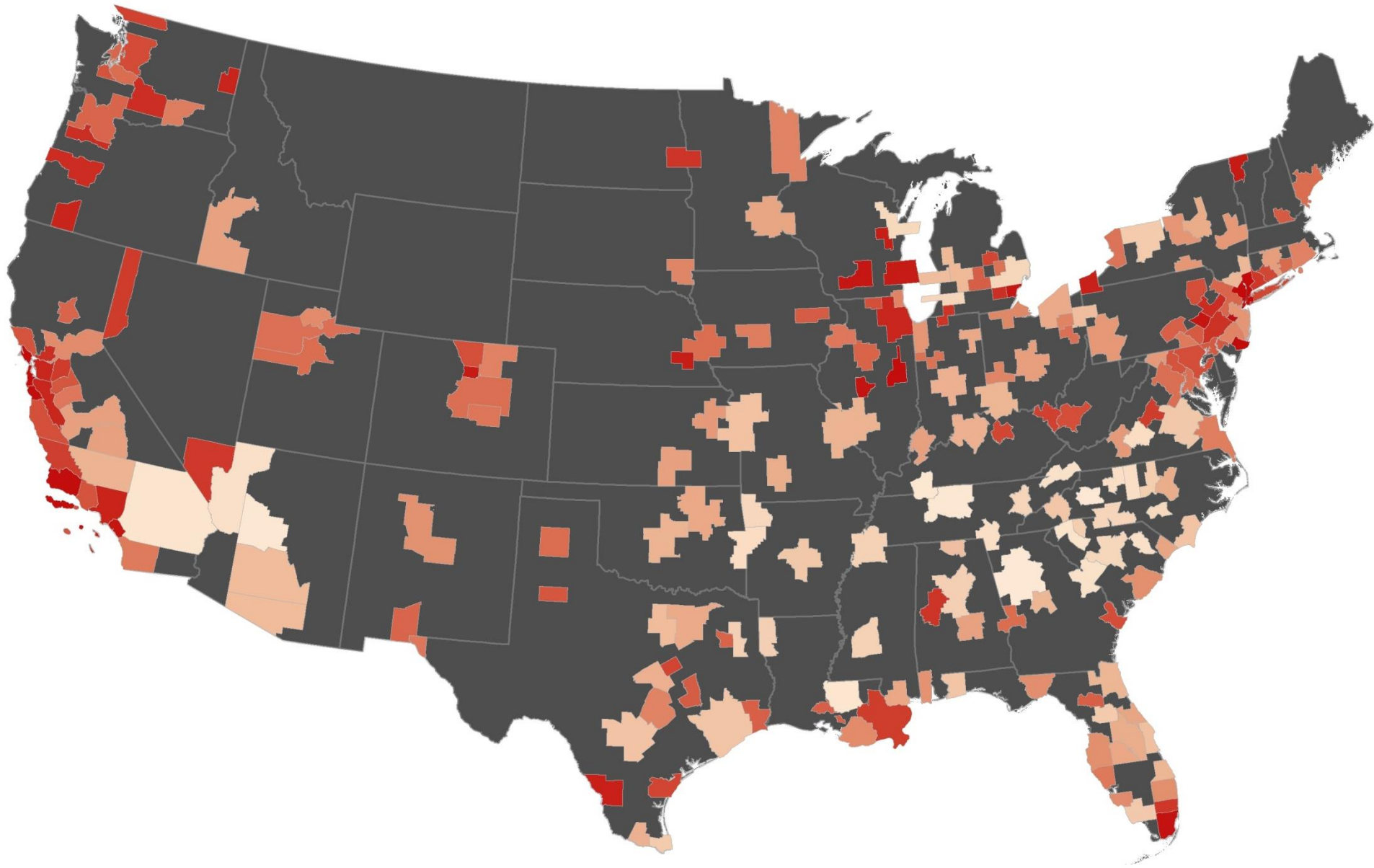
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STREET

COMPACTNESS



# Compactness Scores for 221 Metropolitan Areas and Divisions in the U.S





# Most Sprawling vs. Most Compact MSAs

**New York-White Plains-Wayne, NY-NJ**



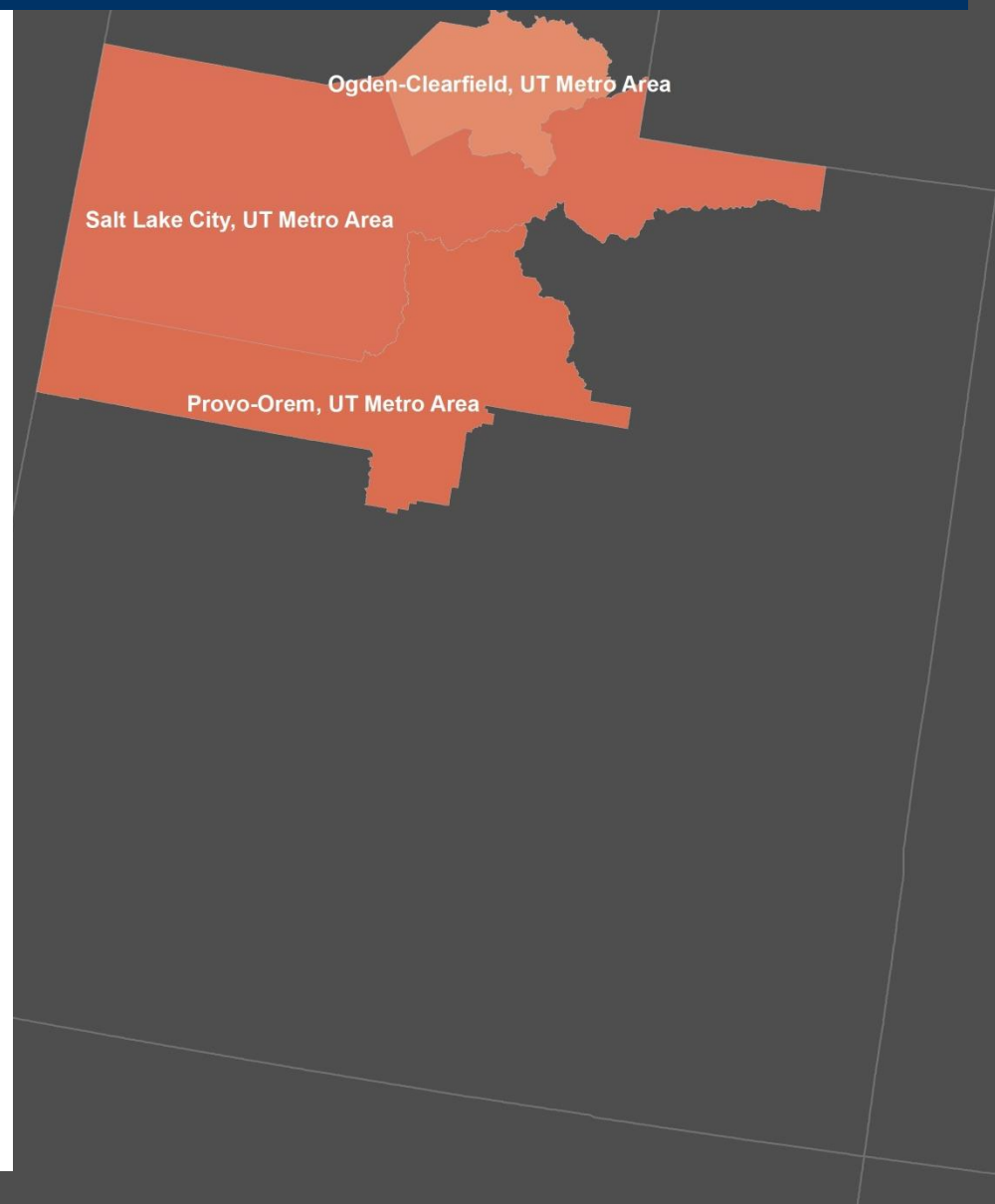
**Hickory-Lenoir-Morganton, NC**





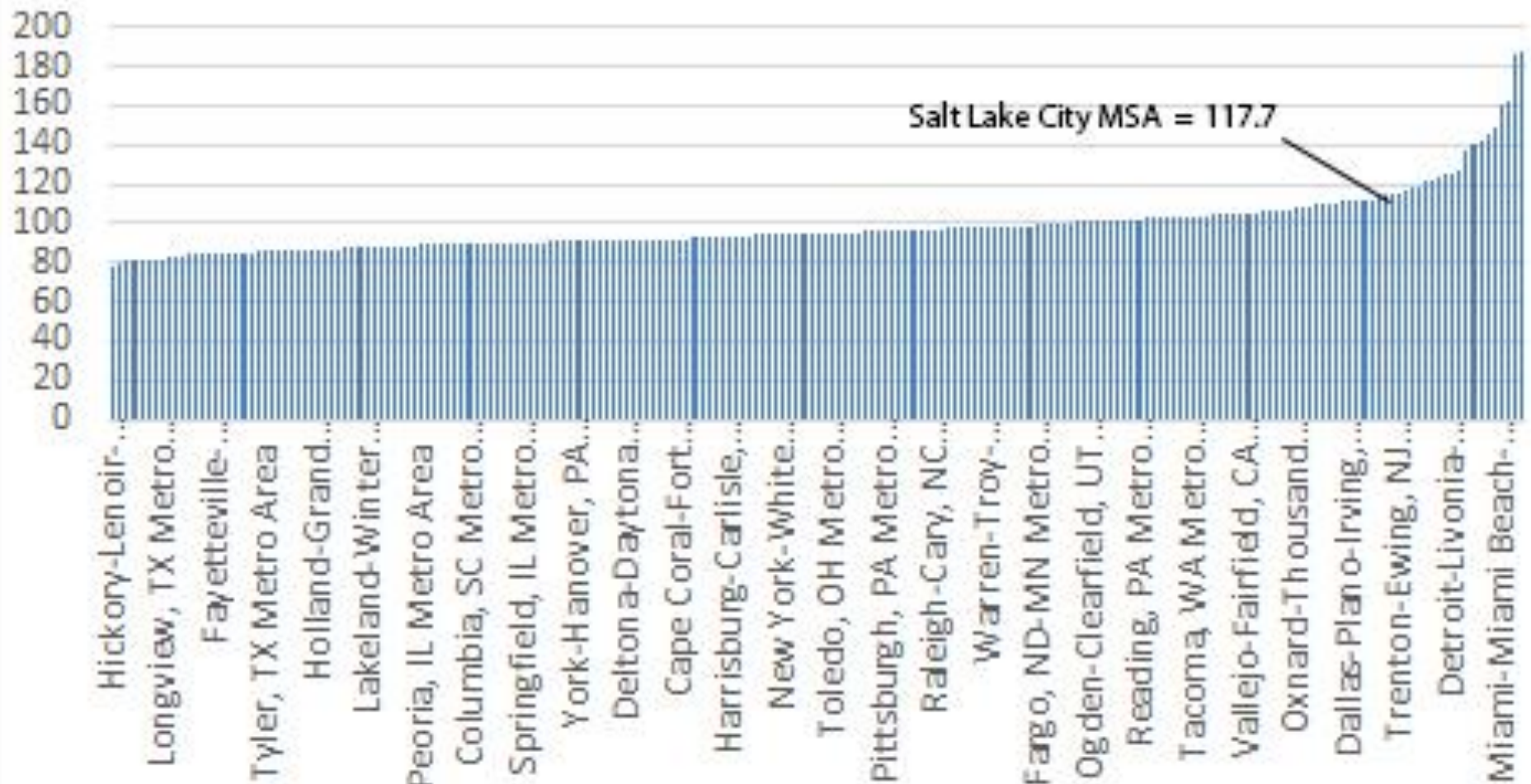
# Compactness Scores for MSAs in Utah

Compactness Ranking	Metropolitan Area	Compactness Score
84	Norwich-New London, CT Metro Area	108.8
<b>85</b>	<b>Provo-Orem, UT Metro Area</b>	<b>108.4</b>
86	Omaha-Council Bluffs, NE-IA Metro Area	108.4
87	Columbus, GA-AL Metro Area	108.4
88	Portland-South Portland-Biddeford, ME Metro Area	107.7
89	Amarillo, TX Metro Area	107.5
90	Tacoma, WA Metro Division	107.5
91	Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Division	107.2
92	Denver-Aurora-Broomfield, CO Metro Area	107.1
93	Canton-Massillon, OH Metro Area	107
<b>94</b>	<b>Salt Lake City, UT Metro Area</b>	<b>107</b>
95	Lafayette, IN Metro Area	106.6
96	Flint, MI Metro Area	106.5
97	Buffalo-Niagara Falls, NY Metro Area	106.4
98	Colorado Springs, CO Metro Area	106.3
99	Merced, CA Metro Area	105.9
100	El Paso, TX Metro Area	105.6
101	Davenport-Moline-Rock Island, IA-IL Metro Area	105.6
102	North Port-Bradenton-Sarasota, FL Metro Area	105.5
103	San Diego-Carlsbad-San Marcos, CA Metro Area	105.2
104	York-Hanover, PA Metro Area	105.1
105	Kennewick-Pasco-Richland, WA Metro Area	105
106	Des Moines-West Des Moines, IA Metro Area	104.9
107	Virginia Beach-Norfolk-Newport News, VA-NC Metro Area	104.5
108	Providence-New Bedford-Fall River, RI-MA Metro Area	104.3
109	Greeley, CO Metro Area	103.6
110	Camden, NJ Metro Division	103.2
111	Akron, OH Metro Area	103.2
112	Duluth, MN-WI Metro Area	103.1
113	Lake County-Kenosha County, IL-WI Metro Division	103.1
114	Austin-Round Rock-San Marcos, TX Metro Area	102.4
115	Sioux Falls, SD Metro Area	101.7
116	Dayton, OH Metro Area	101.5
117	Toledo, OH Metro Area	100.9
118	Houma-Bayou Cane-Thibodaux, LA Metro Area	100.1
<b>119</b>	<b>Ogden-Clearfield, UT Metro Area</b>	<b>99.6</b>
120	Sacramento--Arden-Arcade--Roseville, CA Metro Area	99.3



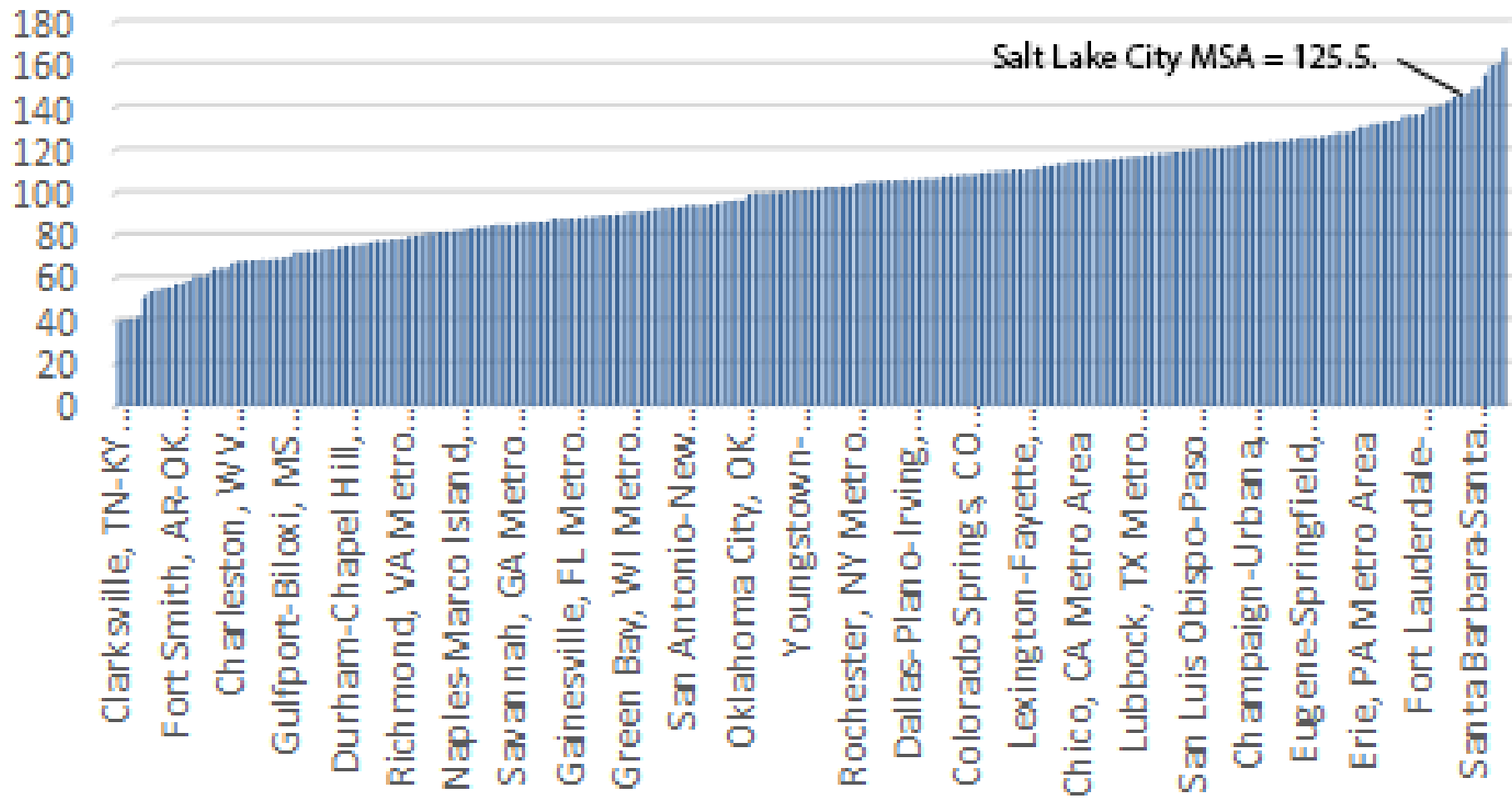


## Density Factor



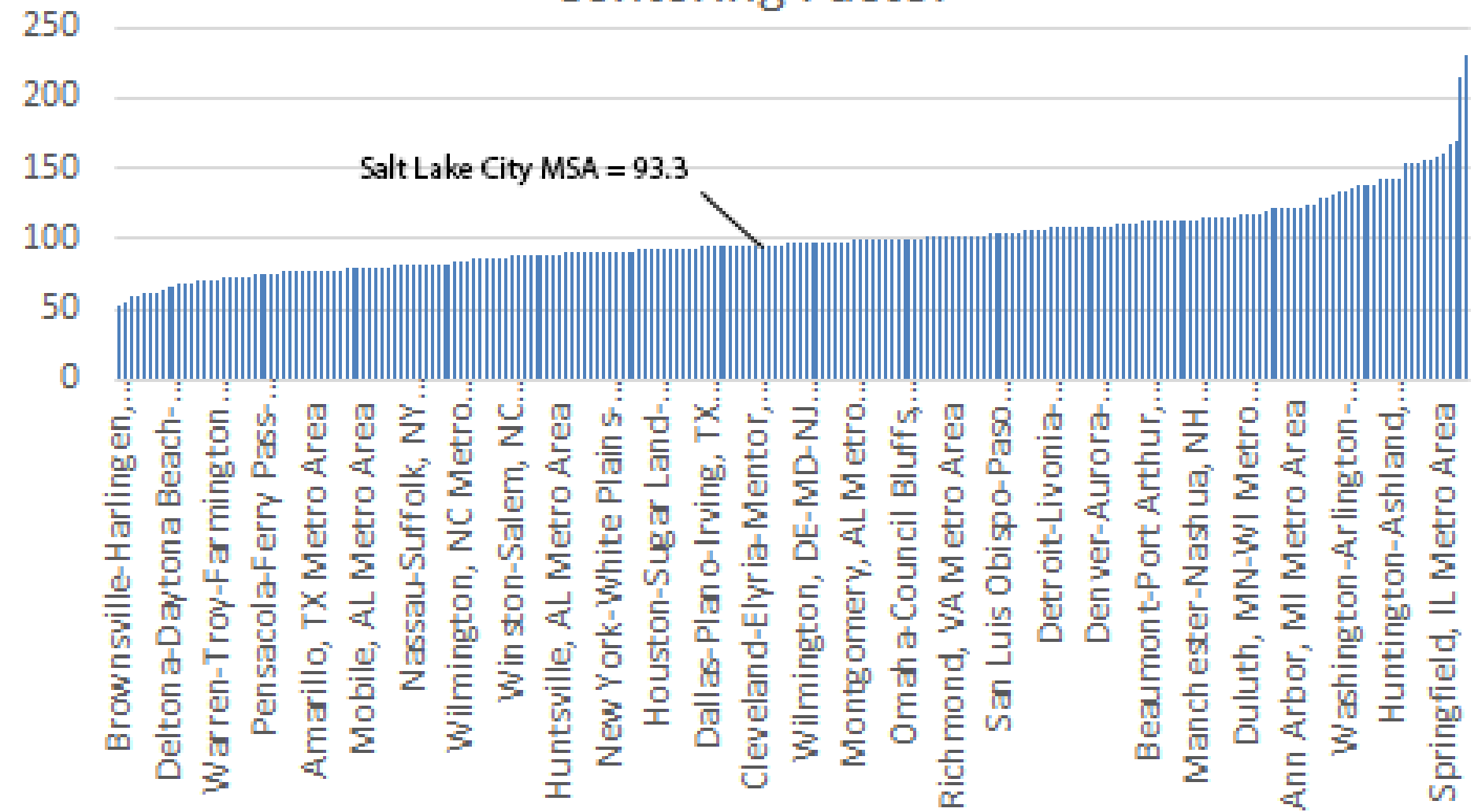


# Mix Factor



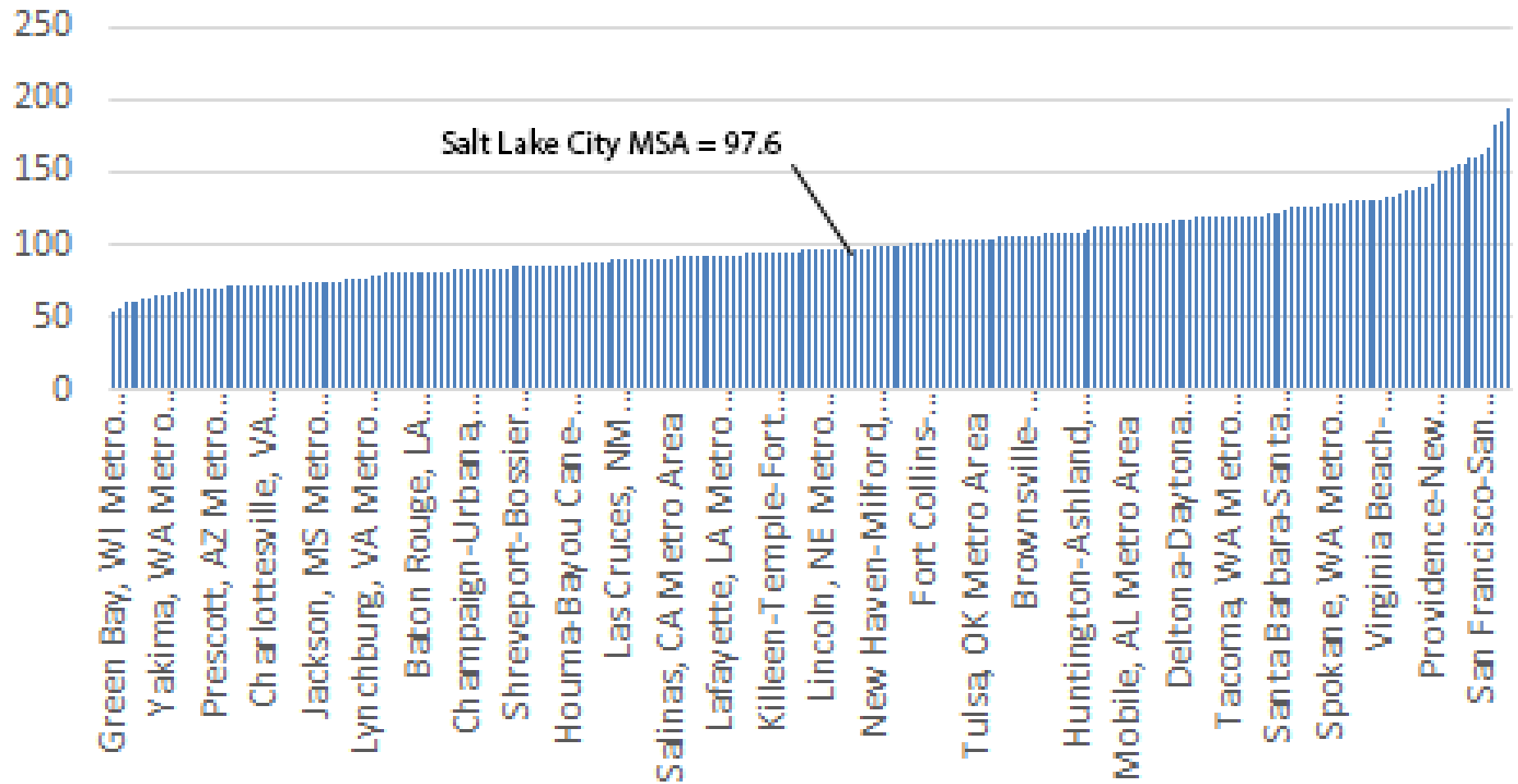


# Centering Factor





# Streets Factor







Contents lists available at ScienceDirect

Health & Place

journal homepage: [www.elsevier.com/locate/healthplace](http://www.elsevier.com/locate/healthplace)



## Relationship between urban sprawl and physical activity, obesity, and morbidity – Update and refinement<sup>☆</sup>



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### ABSTRACT

**Aims:** This study aims to model multiple health outcomes and behaviors in terms of the updated, refined, and validated county compactness/sprawl measures.

**Methods:** Multiple health outcomes and behaviors are modeled using multi-level analysis.

**Results:** After controlling for observed confounding influences, both original and new compactness measures are negatively related to BMI, obesity, heart disease, high blood pressure, and diabetes. Indices are not significantly related to physical activity, perhaps because physical activity is not defined broadly to include active travel to work, shopping, and other destinations.

**Conclusions:** Developing urban and suburban areas in a more compact manner may have some salutary effect on obesity and chronic disease trends.

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# Urban sprawl as a risk factor in motor vehicle crashes

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## Abstract

A decade ago, compactness/sprawl indices were developed for metropolitan areas and counties which have been widely used in health and other research. In this study, we first update the original county index to 2010, then develop a refined index that accounts for more relevant factors, and finally seek to test the relationship between sprawl and traffic crash rates using structural equation modelling. Controlling for covariates, we find that sprawl is associated with significantly higher direct and indirect effects on fatal crash rates. The direct effect is likely due to the higher traffic speeds in sprawling areas, and the indirect effect is due to greater vehicle miles driven in such areas. Conversely, sprawl has negative direct relationships with total crashes and non-fatal injury crashes, and these offset (and sometimes overwhelm) the positive indirect effects of sprawl on both types of crashes through the mediating effect of increased vehicle miles driven. The most likely explanation is the greater prevalence of fender benders and other minor accidents in the low speed, high conflict traffic environments of compact areas, negating the lower vehicle miles travelled per capita in such areas.



# Is Sprawl Affordable for Americans?

## Exploring the Association Between Housing and Transportation Affordability and Urban Sprawl

Shima Hamidi and Reid Ewing

Housing affordability has been one of the most persistent national concerns in the United States, mainly because housing costs are the biggest item in most household budgets. Urban sprawl has been proved by previous studies to be a driver of housing affordability. Previous studies, however, were structurally flawed because they considered only costs directly related to housing and ignored the transportation costs associated with a remote location. This study sought to determine whether, after transportation costs were taken into account, urban sprawl was still affordable for Americans. Multilevel modeling and the recently released location affordability indexes (LAIs) and metropolitan compactness indexes tested the relationship between sprawl and housing affordability. By controlling for covariates, this study found that in compact areas, the portion of household income spent on housing was greater but the portion of income spent on transportation was lower. Each 10% increase in a compactness score was associated with a 1.1% increase in housing costs and a 3.5% decrease in transportation costs relative to income. The combined cost of housing and transportation declined as the compactness score rose. As metropolitan compactness increased, transportation costs decreased faster than housing costs increased, creating a net decline in household costs. This is a novel finding, conditioned only on the quality of the data on which the LAI is based.

One result was the mortgage crisis and ensuing wave of foreclosures that swept the United States in the late 2000s and directly helped precipitate the global financial crisis (the Great Recession). Under traditional metrics of affordability, lenders granted loans to families who were unable to maintain mortgage payments, in many cases because of the crushing costs of transportation in an environment with record high prices for motor vehicle fuel. Foreclosures were centered in the Sunbelt states of Arizona and Nevada, where rapid suburban and exurban development occurred in automobile-dependent areas with virtually no transit access and no ability to walk to anything.

The recent foreclosure crisis raises the question of whether, after transportation costs are taken into account, urban sprawl is still affordable for Americans. This study seeks to answer this question and test the relationship between metropolitan sprawl and housing affordability by using the recently released location affordability indexes (LAIs) (funded by the U.S. Departments of Transportation and of Housing and Urban Development) and compactness indexes funded by the National Institutes of Health and the Ford Foundation. LAIs consider both housing and transportation costs, accounting for locational advantages and disadvantages usually ignored in housing affordability studies.





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## Research Paper

## Does urban sprawl hold down upward mobility?

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## H I G H L I G H T S

- Upward mobility is significantly higher in compact areas than sprawling areas.
- The direct effect of compactness is attributed to better job accessibility in more compact areas.
- As compactness doubles, the likelihood of upward mobility increases by about 41%.
- Among indirect effects of compactness, only poverty segregation is significant and negative.

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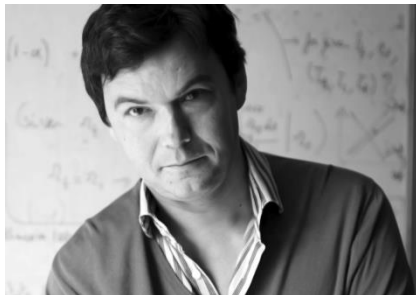
## A B S T R A C T

Contrary to the general perception, the United States has a much more class-bound society than other wealthy countries. The chance of upward mobility for Americans is just half that of the citizens of the Denmark and many other European countries. In addition to other influences, the built environment may contribute to the low rate of upward mobility in the U.S. This study tests the relationship between urban sprawl and upward mobility for commuting zones in the U.S. We examine potential pathways through which sprawl may have an effect on mobility. We use structural equation modeling to account for both direct and indirect effects of sprawl on upward mobility. We find that upward mobility is significantly higher in compact areas than sprawling areas. The direct effect, which we attribute to better job accessibility in more compact commuting zones, is stronger than the indirect effects. Of the indirect effects, only one, through the mediating variable income segregation, is significant.

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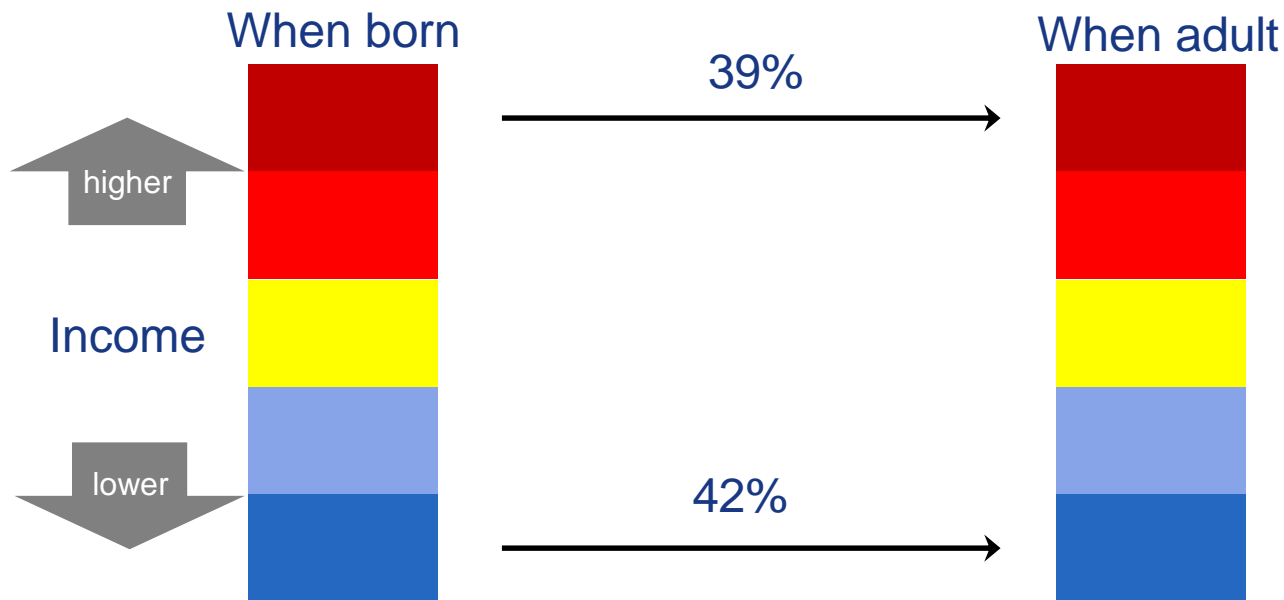


**Rising income inequality**, and associated lack of **upward mobility**, have emerged among the most important issues of our time, prompting concern and commentary from top world leaders, including **President Obama** and **Pope Francis**, and world class scholars, such as Nobel Laureate **Stiglitz** (2012), New York columnist and Nobel Laureate **Paul Krugman**, and **Thomas Piketty** (2014), and many others.





**Upward mobility** refers to one's ability to move to a higher income bracket and social status and is often tied to one's opportunities.



In the United States, 39% of children born to parents in the top fifth of the income distribution will remain in the top fifth for life, while 42% of children born to parents in the bottom fifth income distribution will stay in that bottom fifth.



Race	Family background	Nutrition	Environmental hazards
Income	Family structure	Health Care	Pollution
Schools			

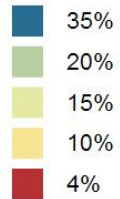
While inequality often makes headlines, **upward mobility** or intergenerational mobility, concerned with the relationship between the socio-economic status of parents and the socio-economic outcomes of their children as adults (Blanden, 2013), is **barely** on the radar of the **urban planning profession**.



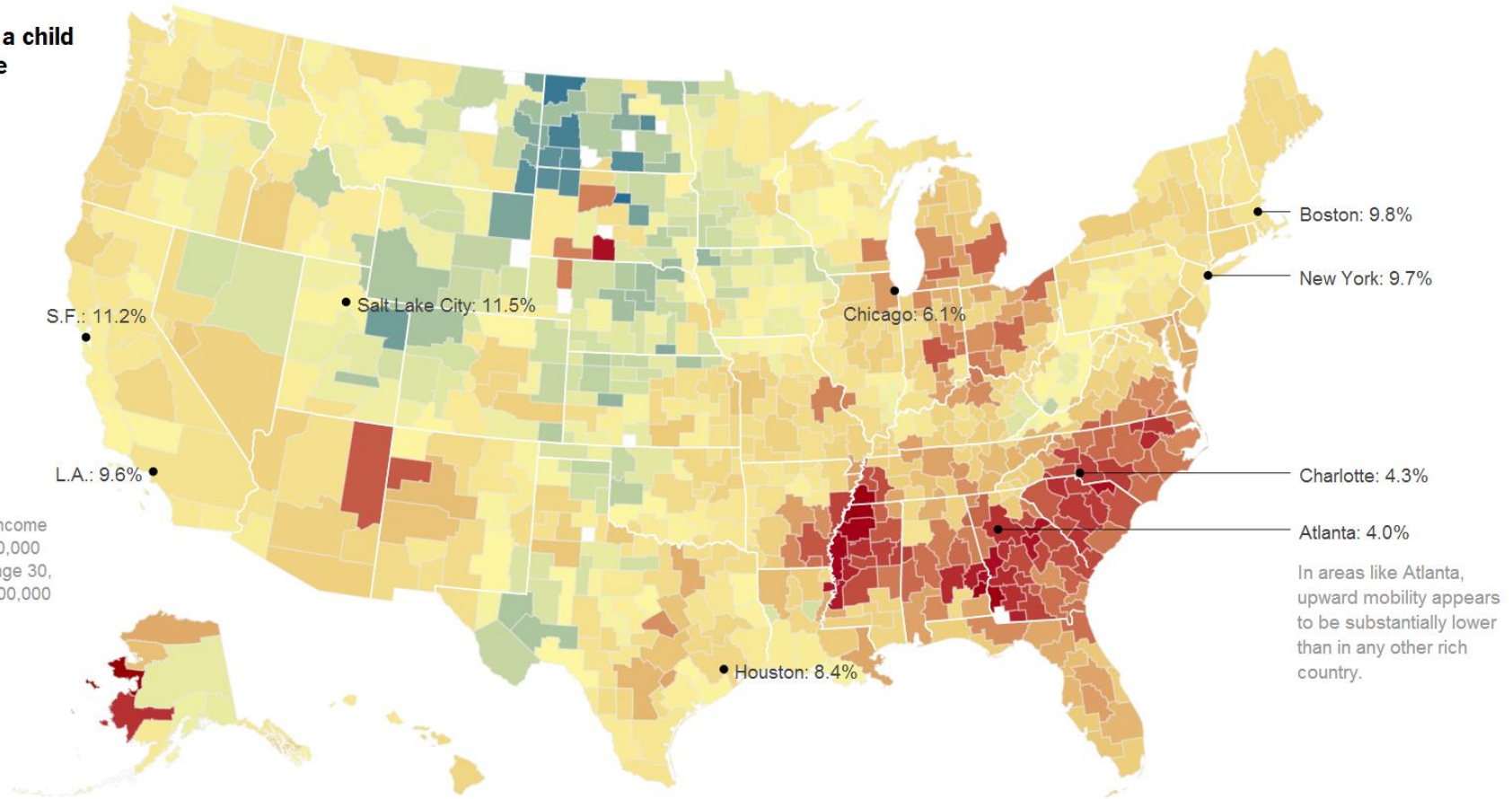


# Upward Mobility for Counties in the U.S.

The chance a child raised in the bottom fifth rose to the top fifth

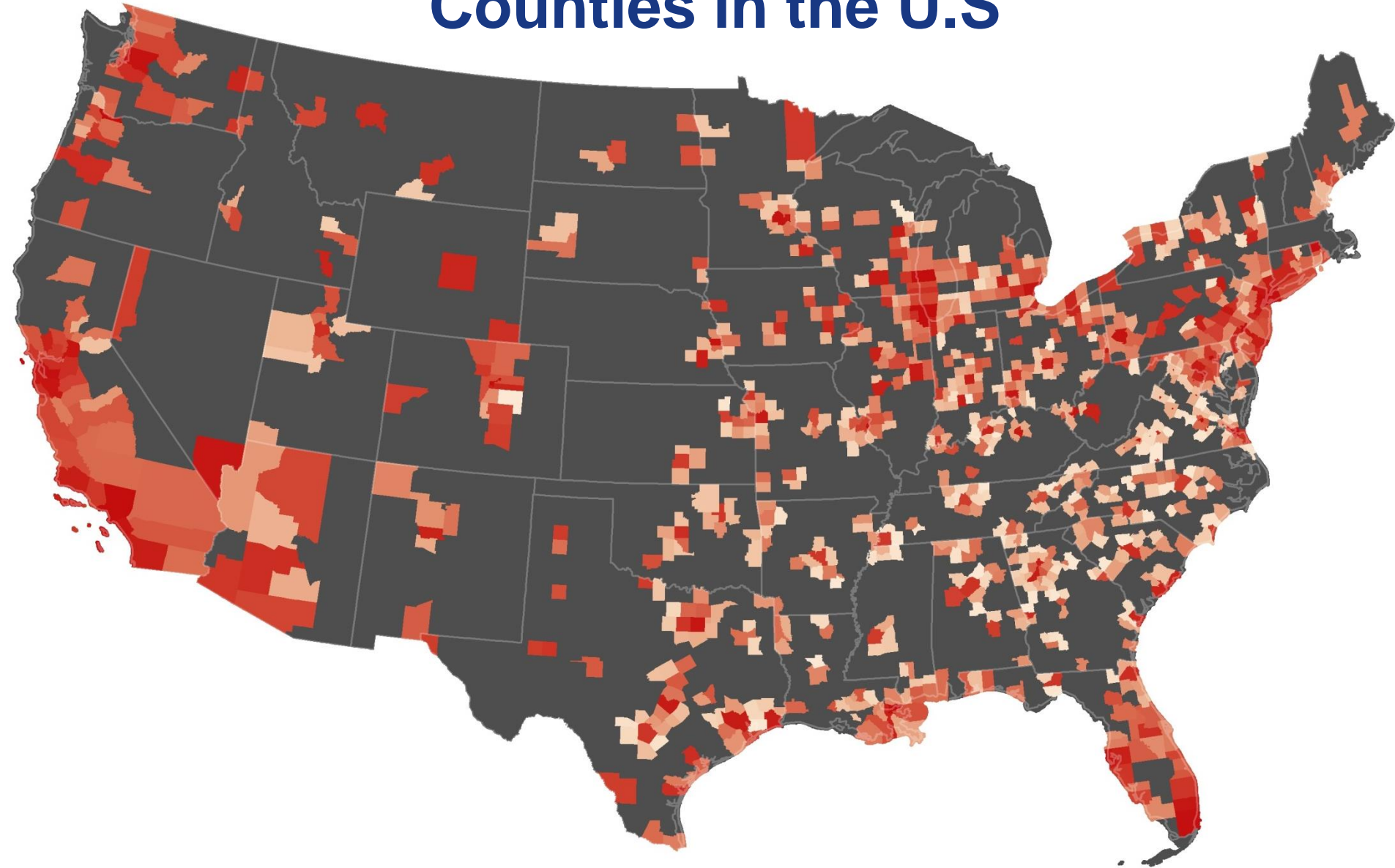


The top fifth is equal to family income of more than \$70,000 for the child by age 30, or more than \$100,000 by age 45.





# Compactness Score for 994 Metropolitan Counties in the U.S







**Upward  
Mobility**



**Urban  
Sprawl**

Inaccessibility to jobs

Social capital

Income segregation

Racial segregation

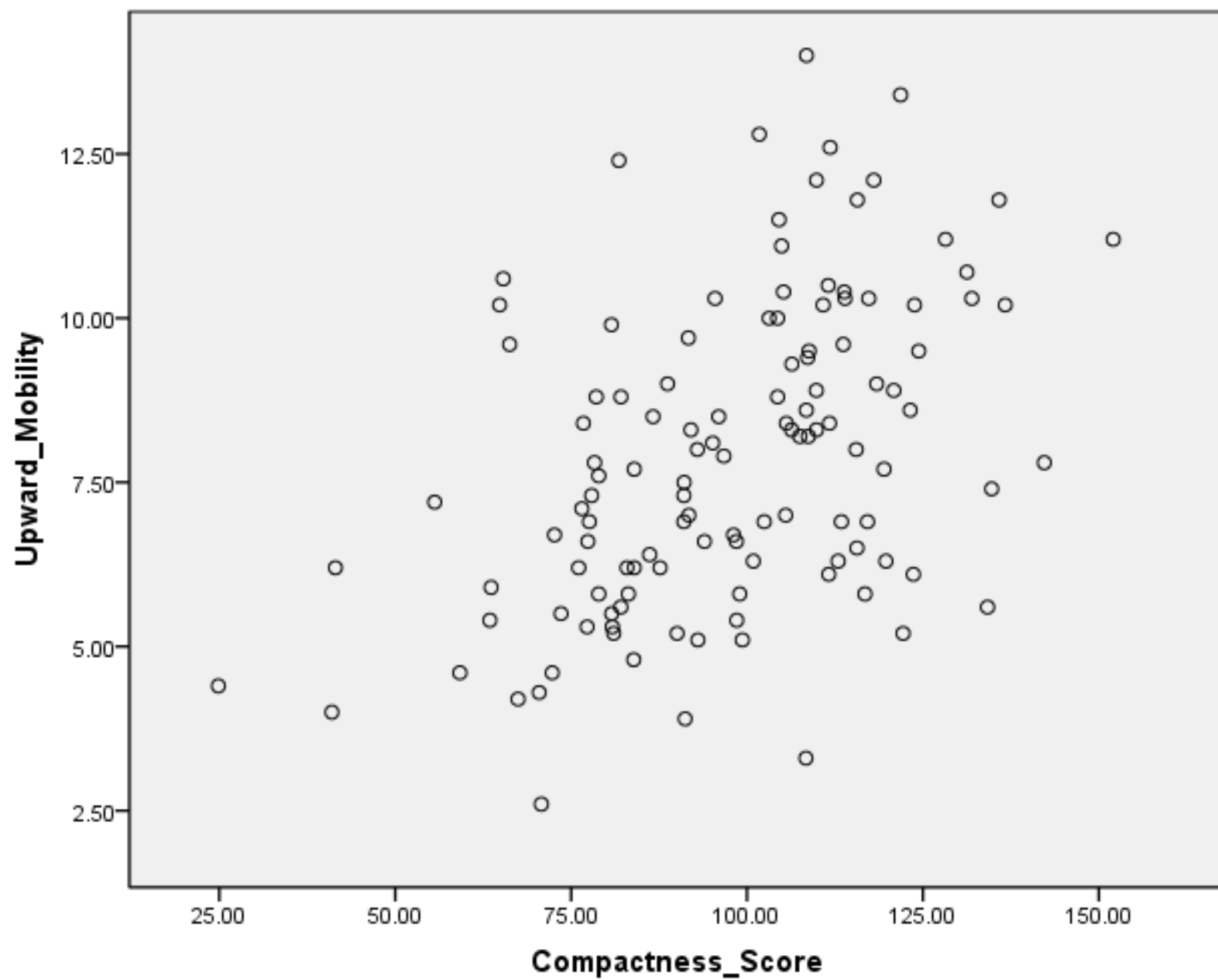


**In this study, we ask whether another variable - metropolitan sprawl - contributes to the low rate of upward mobility for lower-income residents.**

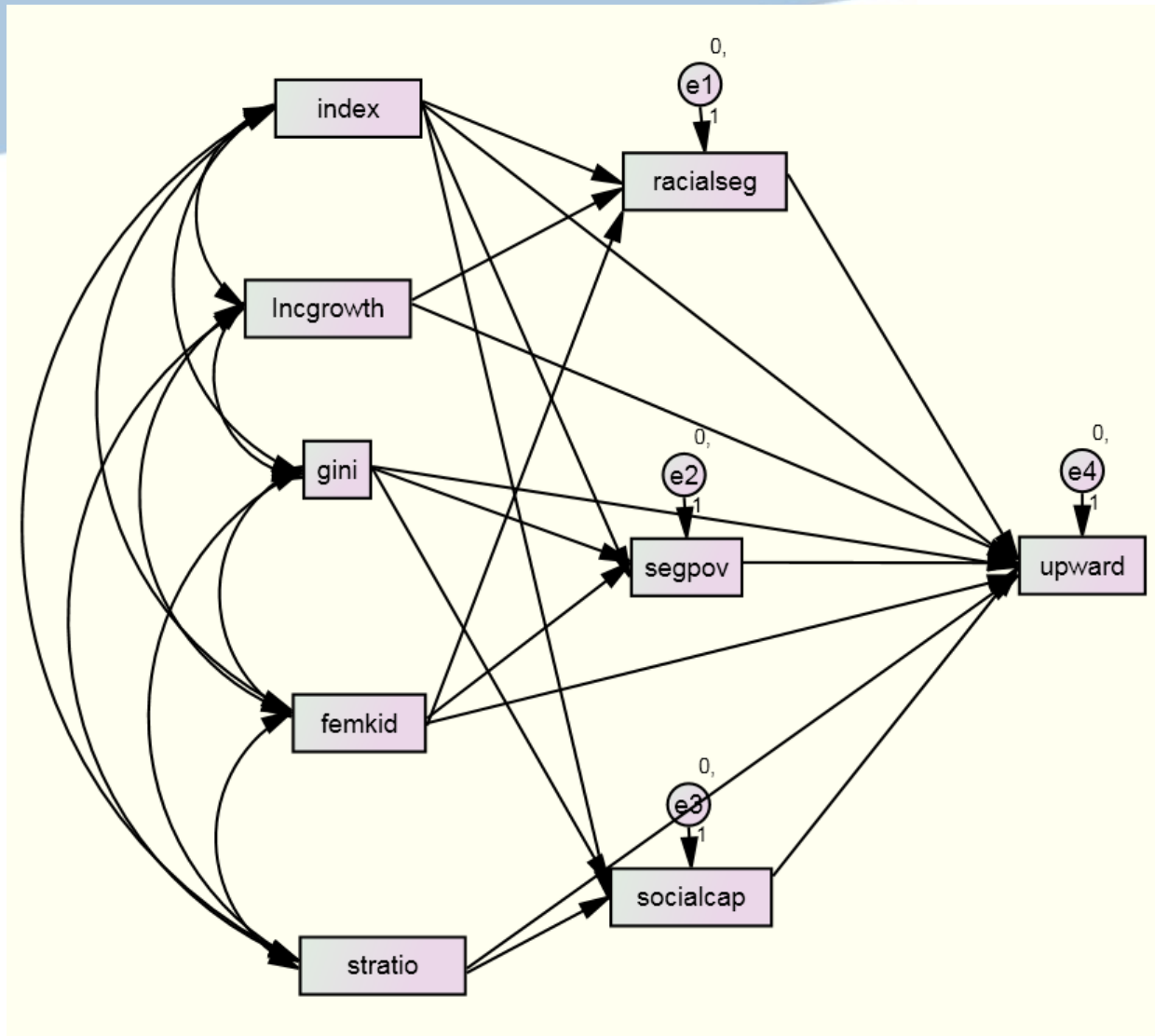
**Table 1**  
Variables used to explain upward mobility (variables log transformed).

Variables		Data sources
<b>Endogenous variables</b>		
upward	The probability that a child born to a family in the bottom quintile of the national income distribution in 1980–1982 reaches the top quintile of the national income distribution in 2010–2011	EOP 2013
socialcap	Index of social capital that aggregates various measures identified by Putnam and collaborators including combining measures of voter turnout rates, the fraction of people who return their census forms, and measures of participation in community organizations	Rupasingha and Goetz (2008); EOP 2013
racialseg	Measure of how minorities are distributed across census tracts within a CZ. This is Thiel's H measure for the four groups: White alone, Black alone, Hispanic, and Other	EOP 2013
segpov	Measure of how evenly those in the lower income quartile are distributed across census tracts within a CZ	EOP 2013
<b>Exogenous variables</b>		
incgrowth	Annualized growth rate (2000–2008) in real household income per working age capita (16–64)	EOP 2013; Census 2000; ACS 2010
gini	Computed by EOP team using parents of children in the core sample, with income top coded at \$100 million in 2012 dollars	EOP 2013
femkid	Share of families with kids with a female householder and no husband	EOP 2013; Census 2000
stratio	Average student–teacher ratio in public schools	EOP 2013
index	Metropolitan compactness index for 2010	Ewing and Hamidi (2014)









Our measure of upward mobility is the likelihood that a child born into the bottom fifth of the national income distribution reached the top fifth by age 30.



**Table 2**

Direct effects of variables on one another in the upward mobility model.

			Coefficient	Standard error	p-value
socialcap	<—	index	0.188	0.071	0.014
racialseg	<—	index	0.019	0.079	0.742
racialseg	<—	femkid	0.447	0.052	0.009
segpov	<—	femkid	0.306	0.097	0.005
racialseg	<—	incgrowth	-0.214	0.069	0.011
segpov	<—	index	0.182	0.081	0.012
segpov	<—	gini	0.109	0.091	0.167
socialcap	<—	gini	-0.647	0.061	0.013
socialcap	<—	stratio	-0.211	0.064	0.006
upward	<—	racialseg	-0.04	0.074	0.4
upward	<—	segpov	-0.156	0.056	0.008
upward	<—	incgrowth	0.345	0.056	0.004
upward	<—	femkid	-0.467	0.065	0.019
upward	<—	socialcap	-0.032	0.106	0.907
upward	<—	stratio	0.146	0.069	0.009
upward	<—	gini	0.003	0.093	0.864
upward	<—	index	0.308	0.071	0.005
Chi-square		1.9			
		degrees of freedom = 6			
		p-value = 0.93			
RMSEA		0			
		p-value = 0.97			
CFI		1.00			

- Income growth is also positively related to upward mobility, while the share of female headed households with kids is negatively related to upward mobility.
- The Gini coefficient is unrelated to upward mobility.
- The student–teacher ratio is positively related to upward mobility.
- The net indirect effect of compactness on upward mobility is negative due to the increase in income segregation that accompanies compactness. However, the indirect effect of compactness through the mediating variable is small compared to the direct effect of compactness on upward mobility.



**Our most important finding is that the metropolitan compactness index has a strong direct relationship to upward mobility.**

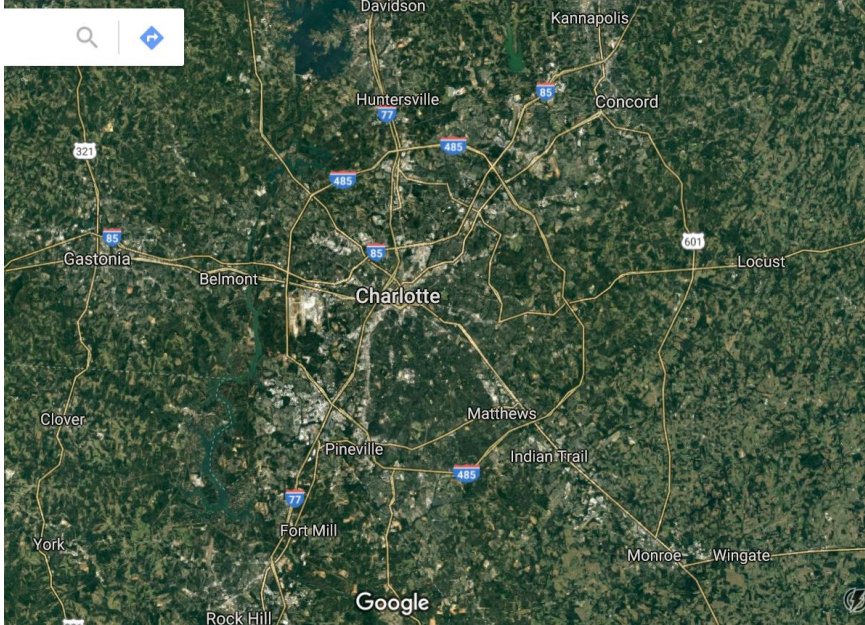
**Table 3**

Standardized direct, indirect, and total effects of the metropolitan compactness index and other variables on upward mobility.

	racialseg	segpov	incgrowth	femkid	socialcap	stratio	gini	Index
Direct effect	-0.04	-0.156	0.345	-0.467	-0.032	0.146	0.003	0.308
Indirect effect	0	0	0.009	-0.066	0	0.007	0.004	-0.035
Total effect	-0.04	-0.156	0.353	-0.533	-0.032	0.153	0.007	0.273

- For the average poor kid in our sample – with an 8% chance of moving up into the top quintile – this represents an increase of 3.2% in absolute terms, well within the range of upward mobility differences from metropolitan area to metropolitan area. The extreme values in our sample are a 2.6% chance of upward mobility in Memphis, Tenn. and 14.0% in Provo, Utah.



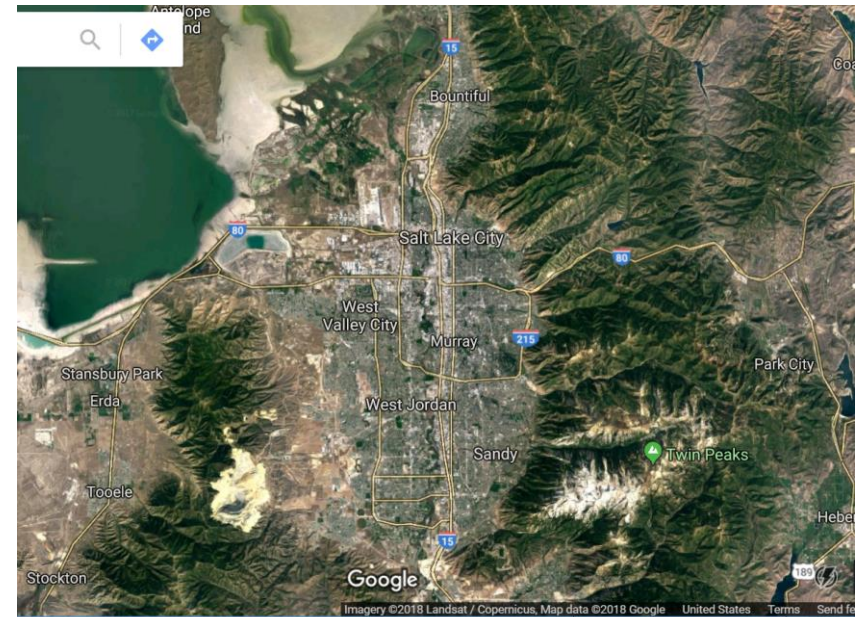


***Compactness score: 70***  
***Upward mobility: 4.3%***  
***Charlotte, NC***

Higher density/mixed-use development has been shown to generate incrementally more jobs, higher wages, economic resilience, and lower unemployment rates, all of which advance upward mobility.

The strong direct relationship to the compactness index carries important consequences for planners and development strategies.

***Compactness score: 105***  
***Upward mobility: 11.5%***  
***Salt Lake City, CA***





While aiming directly for upward mobility can appear as a distant target, the management of the built environment is at heart of planners' everyday agenda. Policies proposed to improve intergenerational mobility tend to emphasize education and health care, rarely considering neighborhood and urban form.

Our study invites **planners and policymakers** to adopt a comprehensive framework of action in investing in **urban form** as a venue to enhance **upward mobility**.

Such efforts are particularly important in affordable housing allocation and transportation investments. The imperative is to ensure a sound spatial coordination of land-uses and transportation infrastructures to create an “enabling” physical environment for low incomes to improve their social and income status. Planners and policymakers could ensure that the development/extension of a transit line is best leveraged by supporting policies for mixed-use development and not furthering sprawl.

