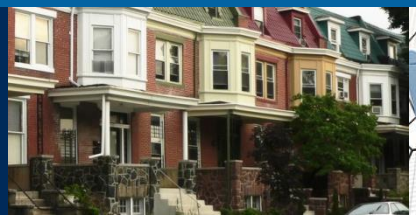
CONVERSATIONS with THE FED

Changing Cities: What's Next for Charlotte?

Santiago Pinto – Senior Policy Economist



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Why is the Fed interested in the economics of cities?

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- All 12 Reserve Banks operate a regional research function devoted to gathering, analyzing and publishing regional data
- From the local to the macro economy

  Macroeconomic research has traditionally studied the impact of aggregate disturbances on the aggregate economy

  Recently, seek to understand how regional shocks affect aggregate economy

- In the U.S., cities are major drivers of regional economic growth

  62.7% of the population live in cities

  Large cities (150,000 or more inhabitants) generate approximately 85% of the country's GDP (2010)

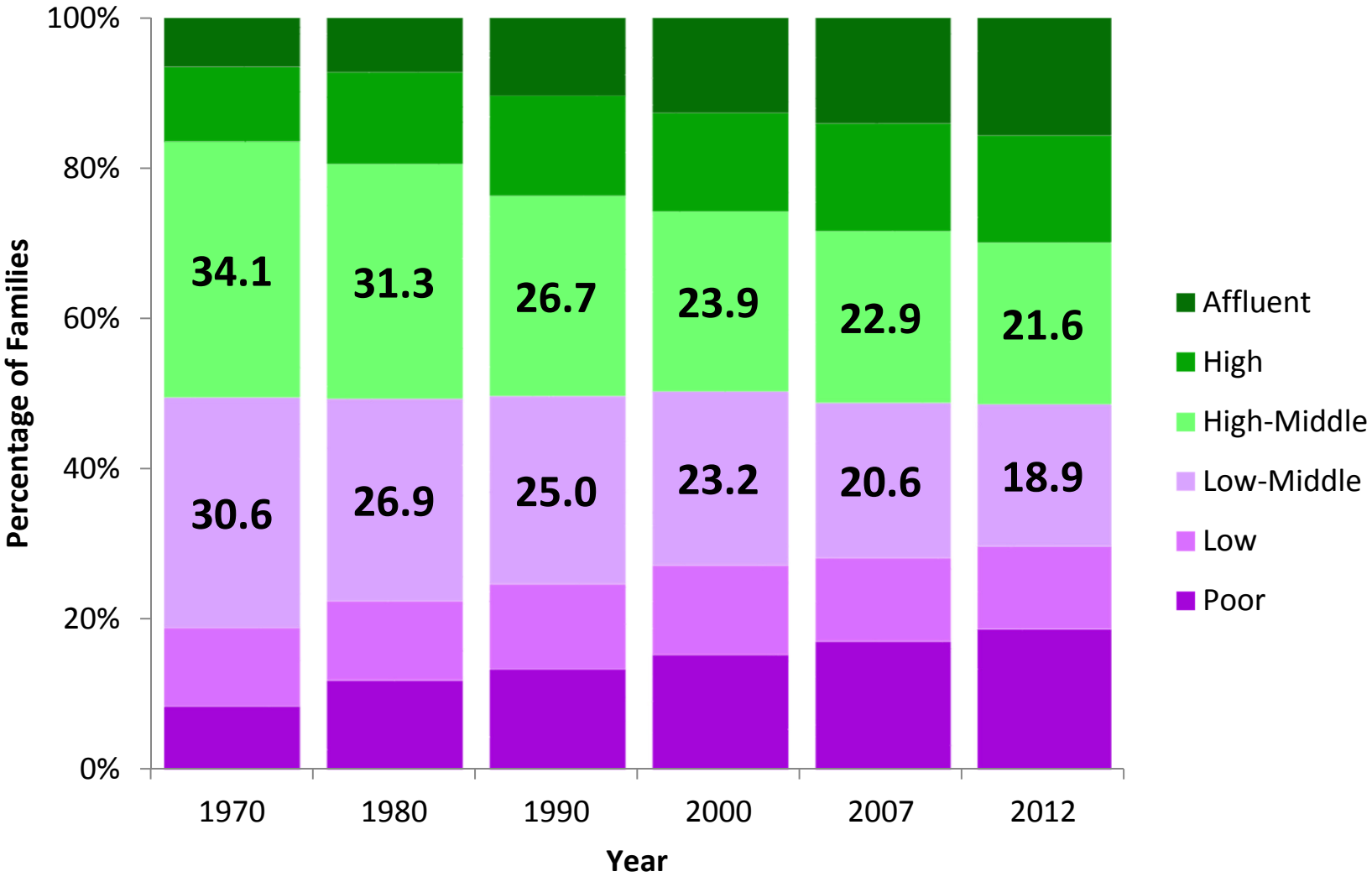
  5^{th} District: many cities have experienced rapid economic growth; while other cities persistent decline and high poverty levels

Urban and regional disparities

Urban and regional disparities in the U.S.A.

- Living conditions vary greatly across regions and cities
- Socioeconomic conditions also differ across neighborhoods within cities
- Average difference in income (2005–2009) ...
  - ... across MSAs $\rightarrow$ average difference in median MSA income between the 75th and 25th MSA $= 24.5\%$
  - ... within MSAs $\rightarrow$ average difference in median census tract income between the 75th and 25th census tract $= 54.8\%$
- Income segregation has steadily increased

Families in high-, middle-, and low-income neighborhoods
MSAs with population greater than 500,000, 1970–2012



Source: The Stanford Center on Poverty and Inequality

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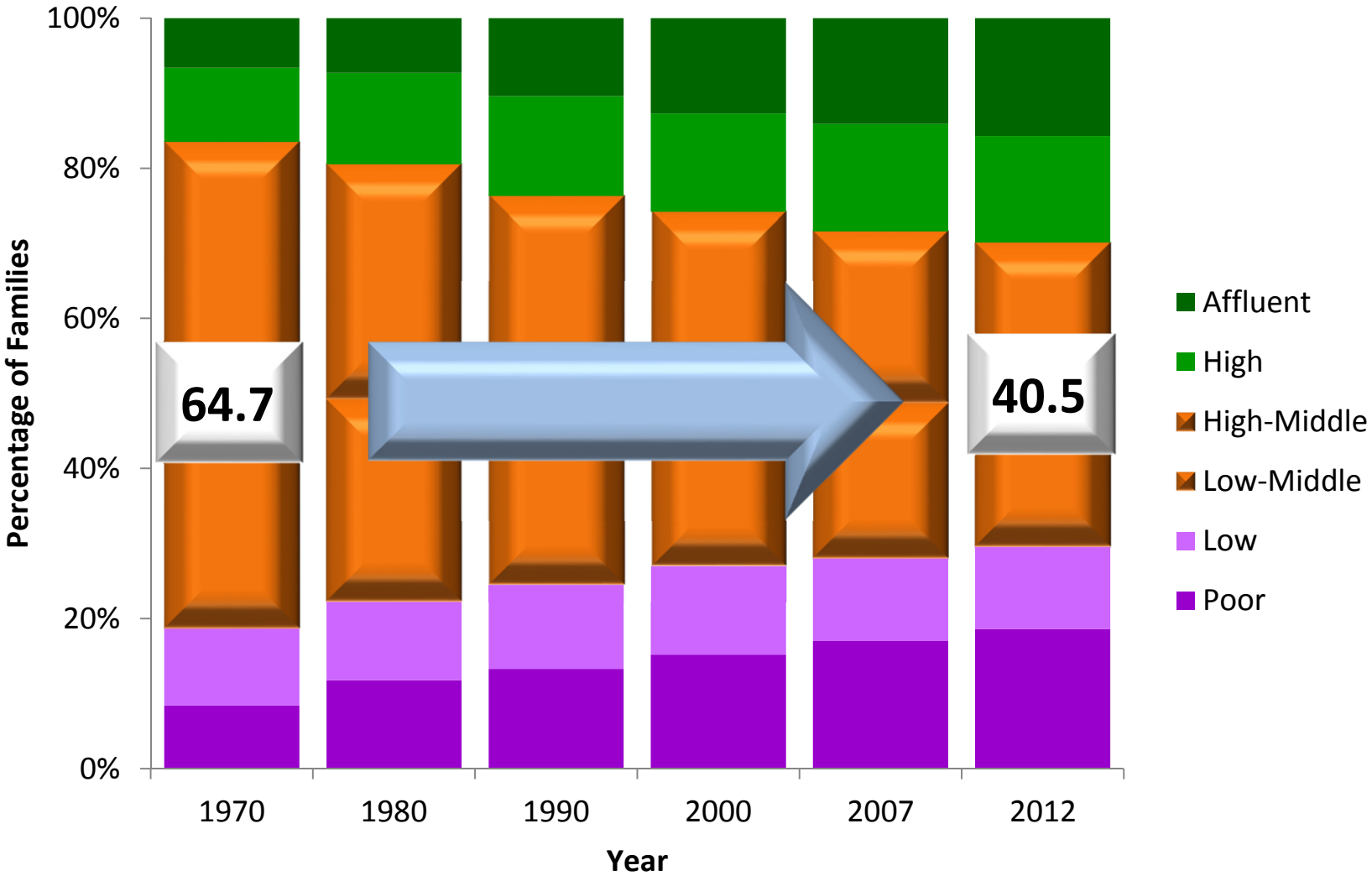

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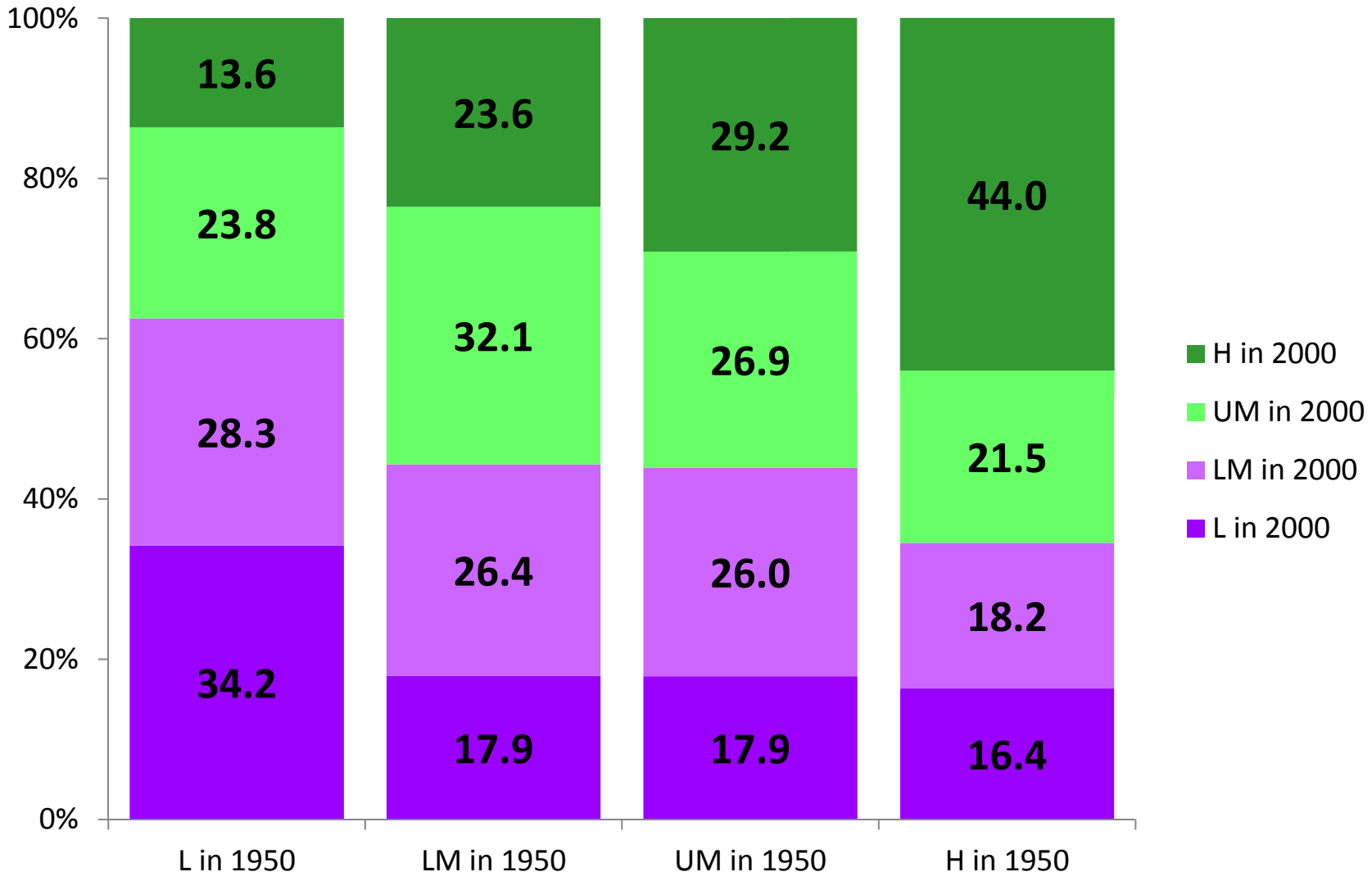
Urban and regional disparities in the U.S.A.

- Income differences across cities and neighborhoods persist in time

  Cities and neighborhoods undergo long cycles of development and decay, but this process may take many years

Transition matrix, census tract relative income, 1950–2000



Note: L: low; LM: lower middle; UM: upper middle; H: high.
Source: Rosenthal and Ross (2014)

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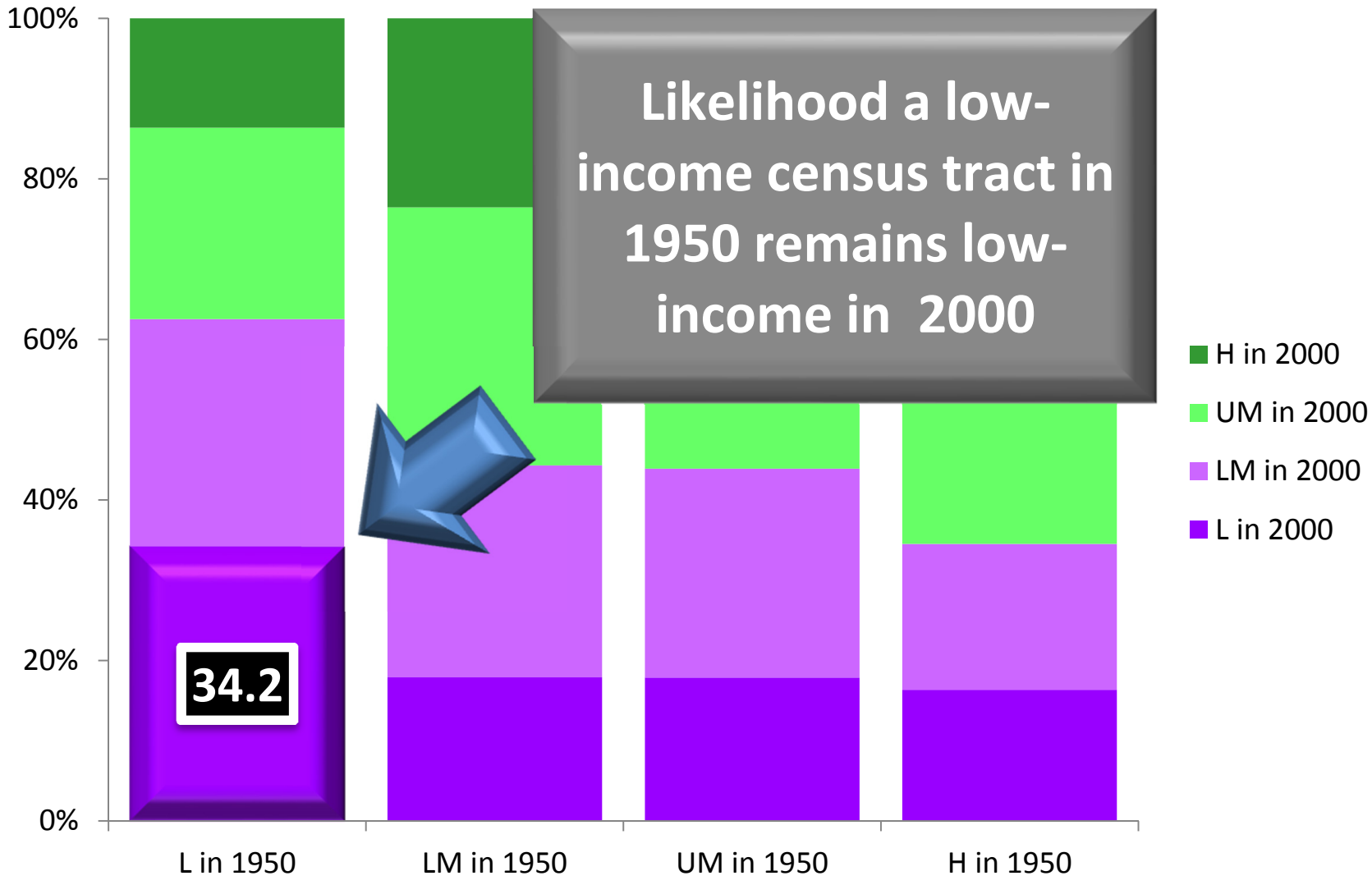

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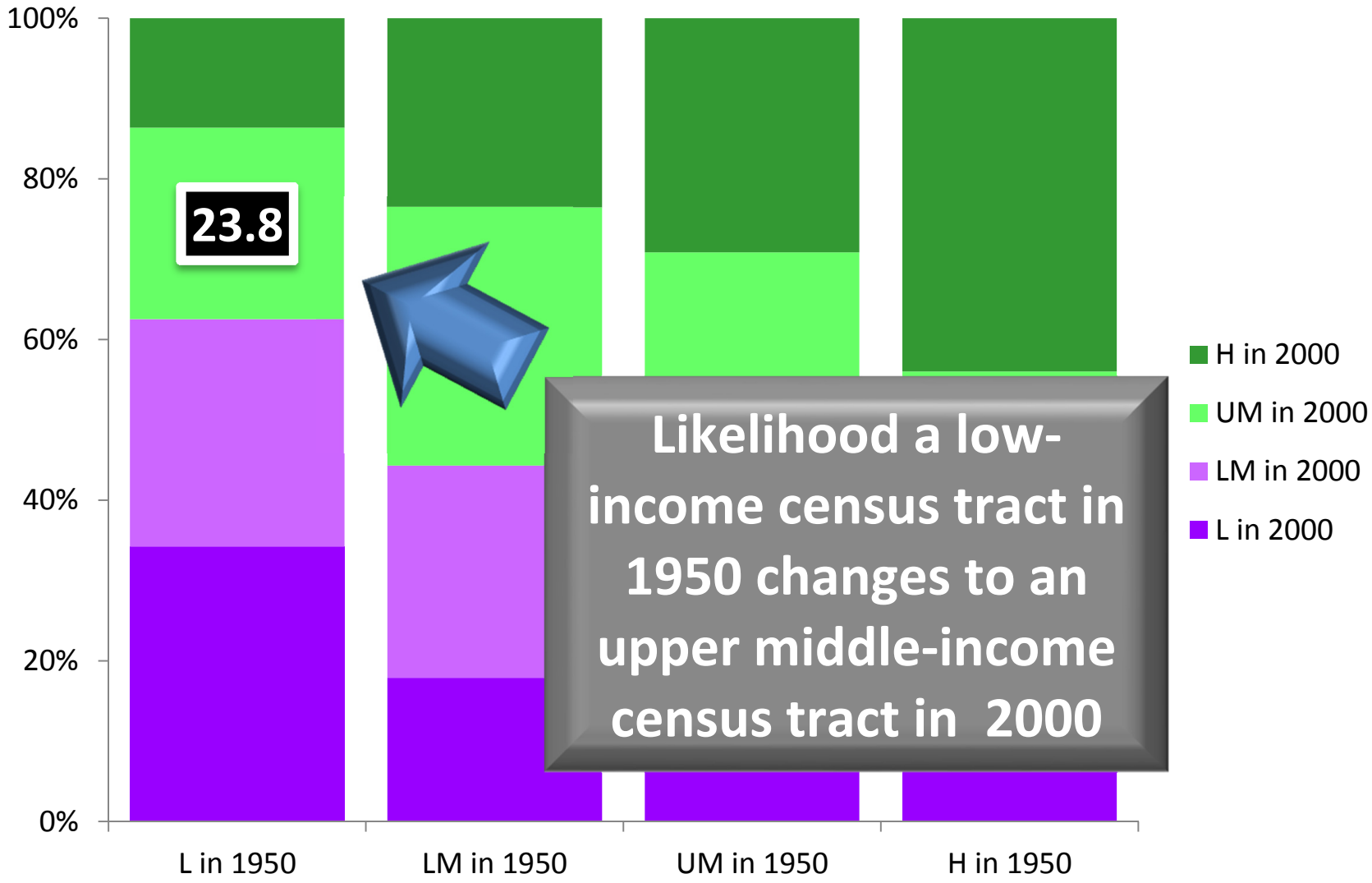

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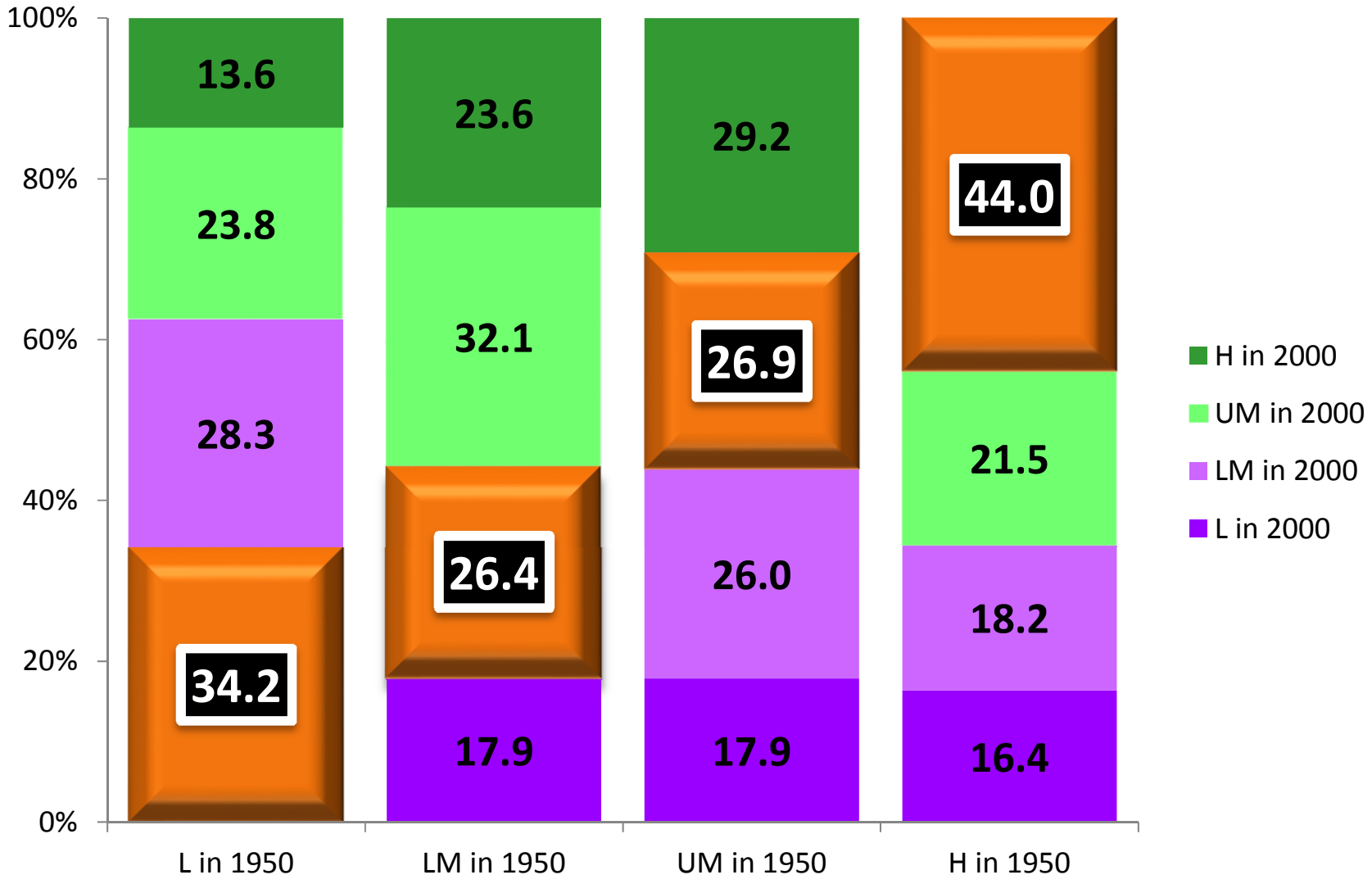

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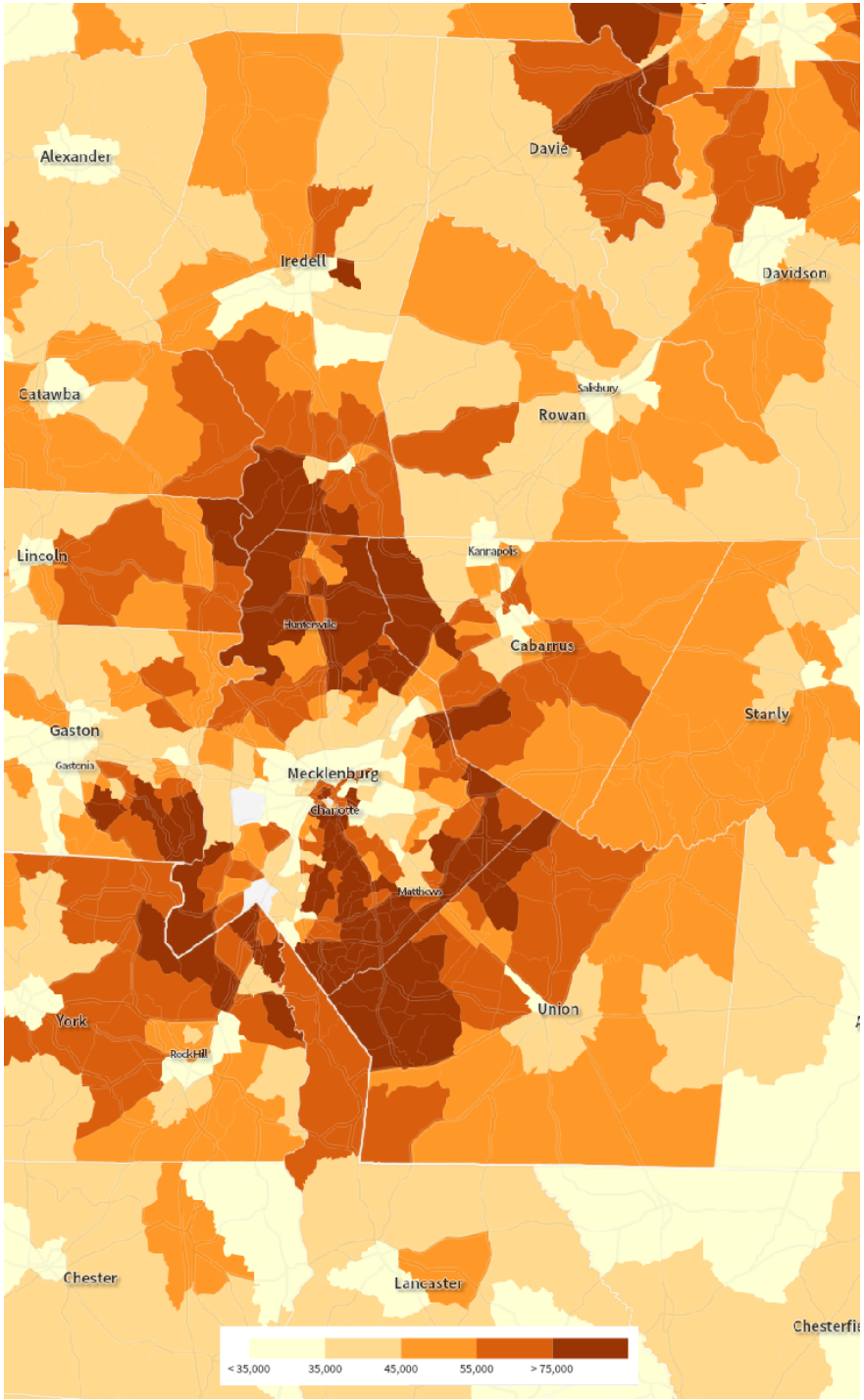
Central City vs. Suburbs

- From 1960 to 2000, the the population in central neighborhoods relative to the MSA population declined sharply in the largest MSAs (from 0.49 to 0.24) and the share of employment declined (from 0.61 to 0.34) [Baum-Snow and Hartley (2017)]

  A large part of the changes driven by the departure of lower-educated white residents from the central city

- During the 2000-2010 period, central neighborhoods in most largest cities experienced population growth

  Downtown neighborhoods were among the most rapidly gentrifying regions of metropolitan areas when measured in terms of income, fraction of white and fraction with a college degree



Median household income, 2013
Source: ACS 2013

Year	Charlotte	MSA
1970	241,420	354,656
1980	315,474	404,270
1990	395,934	515,605
2000	540,828	700,802
2010	731,424	923,202
2016	843,484	1,057,237
2017	859,035	1,076,837

Population
Source: Census Bureau

What explains such changes?

What explains such changes?

- A variety of factors affect where households (and businesses) locate
    1. Household income
    2. Local amenities
    3. Transportation
    4. Accessibility to jobs

Household income and sorting

- In most metropolitan areas of the US, the suburbs are of higher income status and the central cities are relatively poor (there are important exceptions)
- However, distance to the MSA center alone is a rather weak predictor of a neighborhood's economic status
- Other mechanisms:
  - Relative importance of commuting cost and demand for housing
  - Social dynamics
  - Filtering model of housing
  - Local public services (education)
  - Location-specific amenities
  - Access to public transit

Segregation and Tipping models

- Tipping models characterize neighborhood demographic changes taking place slowly in time [Schelling (1971), Card et al (2008)]

  Role of social dynamics in driving changes in the economic status of neighborhoods

- Insightful way of thinking about segregation

  The dynamics of social interactions within a neighborhood between different groups, for instance, minorities and whites, is such that when the share of minorities exceeds a critical or "tipping point," whites will leave and the neighborhood becomes completely segregated

- Evidence shows that tipping appears to be one-sided

  Neighborhoods with minority shares above the tipping point for their metro area exhibit rising minority shares

  Neighborhoods with minority shares below their tipping points exhibit relatively stable minority shares

Gentrification

- After a city-wide positive demand shock, the growing population of high-income households seek housing in lower-income communities adjacent to existing high-income neighborhoods, expanding existing high-income geographic areas [Guerrieri, Hartley, and Hurst (2013)]

  House prices increase more in low-income communities than in high-income communities (within-city variation in house price growth)

- Natural aging of housing (filtering model) [Brueckner and Rosenthal (2009)]

Importance of Location-specific Amenities

- Differences in physical amenities

  May help explain differences in economic status across communities, but do not imply systematic spatial patterns of where high and lower income neighborhoods will be found [Brueckner et al. (1999)]

- Amenities facilitated by urban density (endogenous amenities), more important at explaining changes in spatial patterns

  High-end restaurants, theater, and various other cultural amenities require large numbers of users to bring down average cost (thrive best in areas with larger populations)

  To the extent that such cultural amenities appeal to higher income families, they would tend to reside in more densely populated areas

Importance of Location-specific Amenities: Evidence

- Shifts in amenity valuations rather than labor market opportunities or housing cost changes have primarily driven changes in central neighborhood choices [Baum-Snow and Hartley (2017)]
- Recent urban revival explained by the tendency of young college-educated individuals to reside near city centers in larger cities [Couture and Handbury (2016)]

  Changing preferences of young college graduates for non-tradable service amenities (restaurants, bars, gyms, and personal services) account for more than 50% of their growth near city centers

Unintended consequences of policies: School choice

- The introduction of private school vouchers, targeted to low performing school districts, induces relatively high income households to move into low-performing districts in order to take advantage of lower housing values and the ability to use school vouchers [Ferreyra (2007), Nechyba (2000)]

  Higher-income households buy homes in relatively high-quality neighborhoods, driving up property values, and "pricing out" some of the original lower-income residence of low-performing districts

2002 NCLB Act and expanded school choice

- States should administer standardized testing

  Schools that meet standards → "Adequate Yearly Progress" (AYP)
  Schools that fail to achieve AYP for 2 consecutive years → penalized: students attending low performing schools must be given the opportunity to attend a non-failing school

- In school districts with extensive school choice opportunities and many oversubscribed schools, students at failing schools given improved odds in lotteries for spots at oversubscribed schools

- Households with strong preferences for school choice or school quality may strategically move into the attendance zones of failing schools in order to improve their likelihood of being admitted into high performing schools

Evidence: Charlotte-Mecklenburg County, NC

- In neighborhoods within attendance zones of failing schools [Billings et al (2018)]
  - Residential property values and new homebuyer income increase
  - Probability of attending a non-assigned or magnet school increases
  - Households that move into these neighborhoods are substantially more likely to attend a non-assigned school than current residents
- Evidence suggests that expanded school choice opportunities may reduce residential income stratification and induce gentrification ...

  ... But residential mobility decreases in these neighborhoods
  - Maybe original residents of these neighborhoods value the amenity effects of gentrification more than the increase in housing values?
- Unintended consequence of policy: benefits of the programs mainly accruing to presumably newer and wealthier households

Role of Transportation

- Transportation costs and city growth
  - A 10% increase in a city's initial stock of interstate highways causes a 1.5% increase in employment [Duranton and Turner (2012)]
- Transportation infrastructure and land use
  - Positive relationship between roads and sub-urbanization: an additional ray of interstate highways causes a 9% decline in central city population [Baum-Snow (2007)]
- However, central cities experienced not only a relative decline but also an absolute decline in population
  - Other reasons: concomitant increase in incomes; flight from blight
- Transportation-mode choice: public transit and access to cars
  - May explain income sorting: central location of lower income households [Glaeser et al (2008)]
  - Lower income families own fewer cars; more reliant on public transit
  - Public transit opportunities more accessible in central cities than in suburbs

Spatial mismatch between jobs and workers

- Spatial mismatch hypothesis [Kain (1964, 1968)]

  Persistent unemployment in urban African-American communities due to a movement of jobs away from those areas, coupled with the inability to relocate closer to jobs

  Lack of connection to job opportunities may affect an individual's prospects in the labour market, especially for low-skilled workers

- Research finds that better job accessibility significantly decreases the duration of joblessness among lower-paid displaced workers

- Policy recommendations

  Policies that reduce housing discrimination

  Help those who want to move out of high unemployment areas

  Jobs closer to high unemployment areas (Enterprise Zones)

  Enhance transportation links between high unemployment areas and locations with an abundance of jobs

Creation of jobs nearby

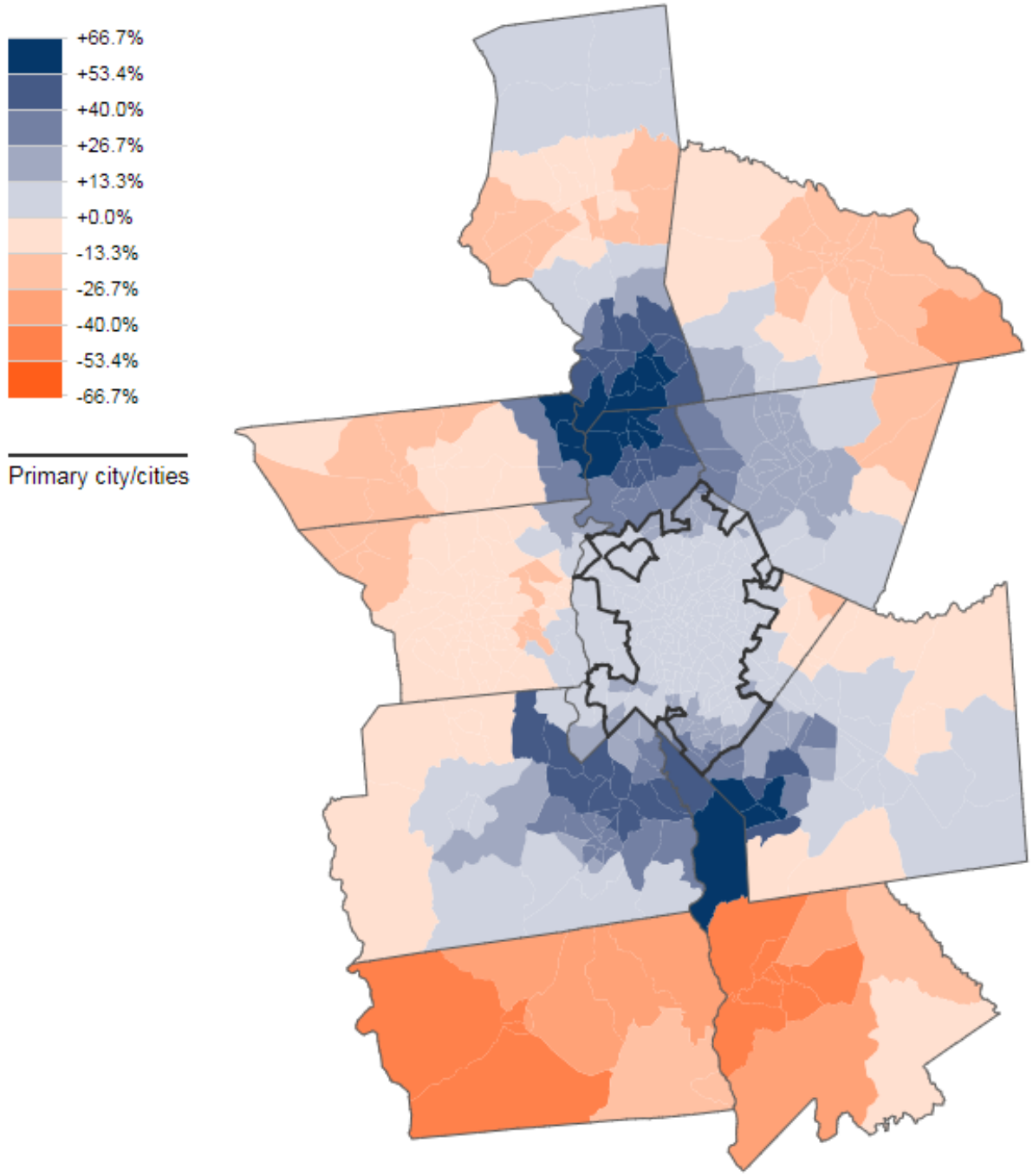
- During the 2000–2012 period, the number of jobs within the typical commute distance for residents in a major MSA area fell by 7%

  [Keebone and Holmes (2015)]

  Charlotte-Concord-Gastonia, NC-SC MSA = +6.3%

  Charlotte City, NC = +0.8%

  Charlotte City, NC, high poverty neighbohoods = -2.9%



Percentage change in the number of nearby jobs, 2000–2012
Source: Brookings Institute

A few takeaways

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1. Changes in the economic status of cities and neighborhoods are common

   These changes are slow and can take decades

2. Powerful forces in cities explain the dramatic changes in the spatial patterns that have been taking place in the U.S. since the 1960s

   Even small changes can have a large impact over the long-run due to the complicated interactions taking place in cities

3. Several underlying factors that explain such dynamic

   The organic emergence of certain kind of amenities in central neighborhoods may explain the recent revival of densely populated areas

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