From Five CTs to Six:
A New Framework for Understanding Connecticut's Towns

Jason DeBari-Cheung, Director of Data & Analytics | CTData
Cynthia Willner, Director of Research | CTData
Chase Wilson, Research Analyst | CTData


SHIPMAN

From Five CTs to Six:

A New Framework for Understanding Connecticut's Towns



Thank you to our sponsors!

CT data Board of Directors
Chair: David Nee

Connie



SHIPMAN

quantumct

PARTNERSHIP FOR STRONG COMMUNITIES

CONNECTICUT HOUSING FINANCE AUTHORITY
Unlocking Solutions, Building Strong Communities.

UCONN SCHOOL OF PUBLIC POLICY

cbia foundation

GREATER HARTFORD GIVES FOUNDATION

TD

Accounting & Human Resources

THE NARRATIVE PROJECT

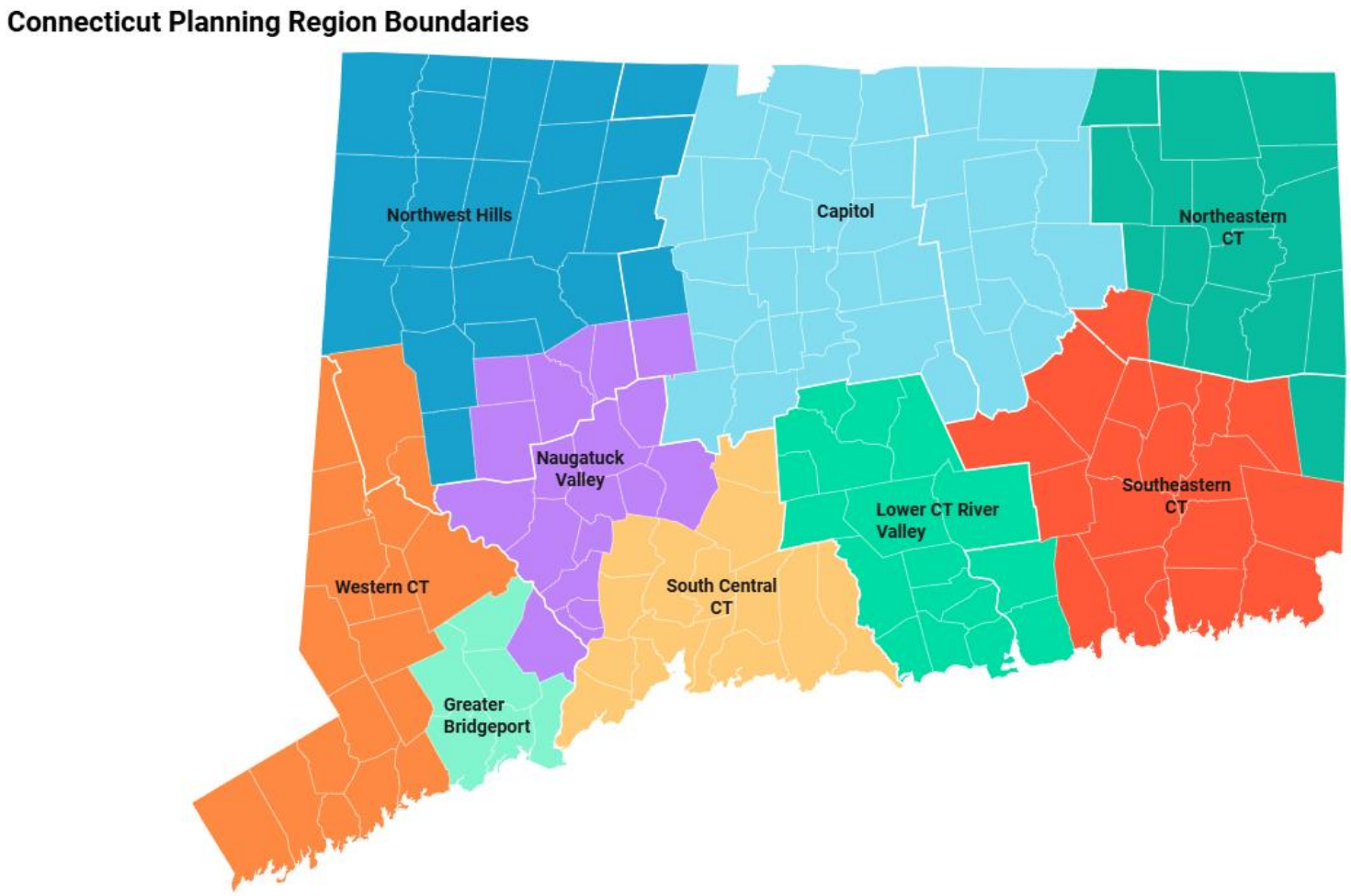
2026 CT data Conference

#CTDataConf | ctdata.org

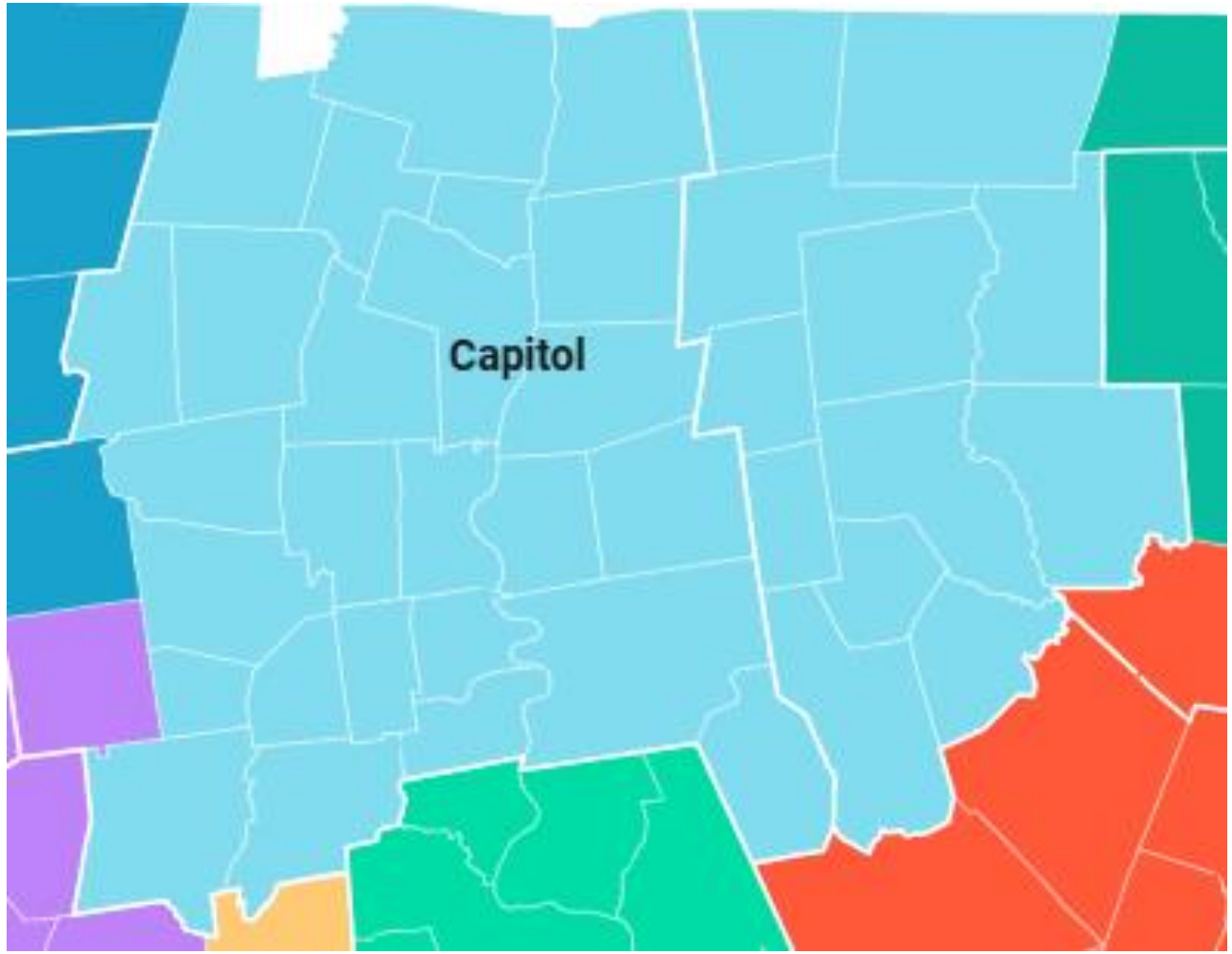


Background

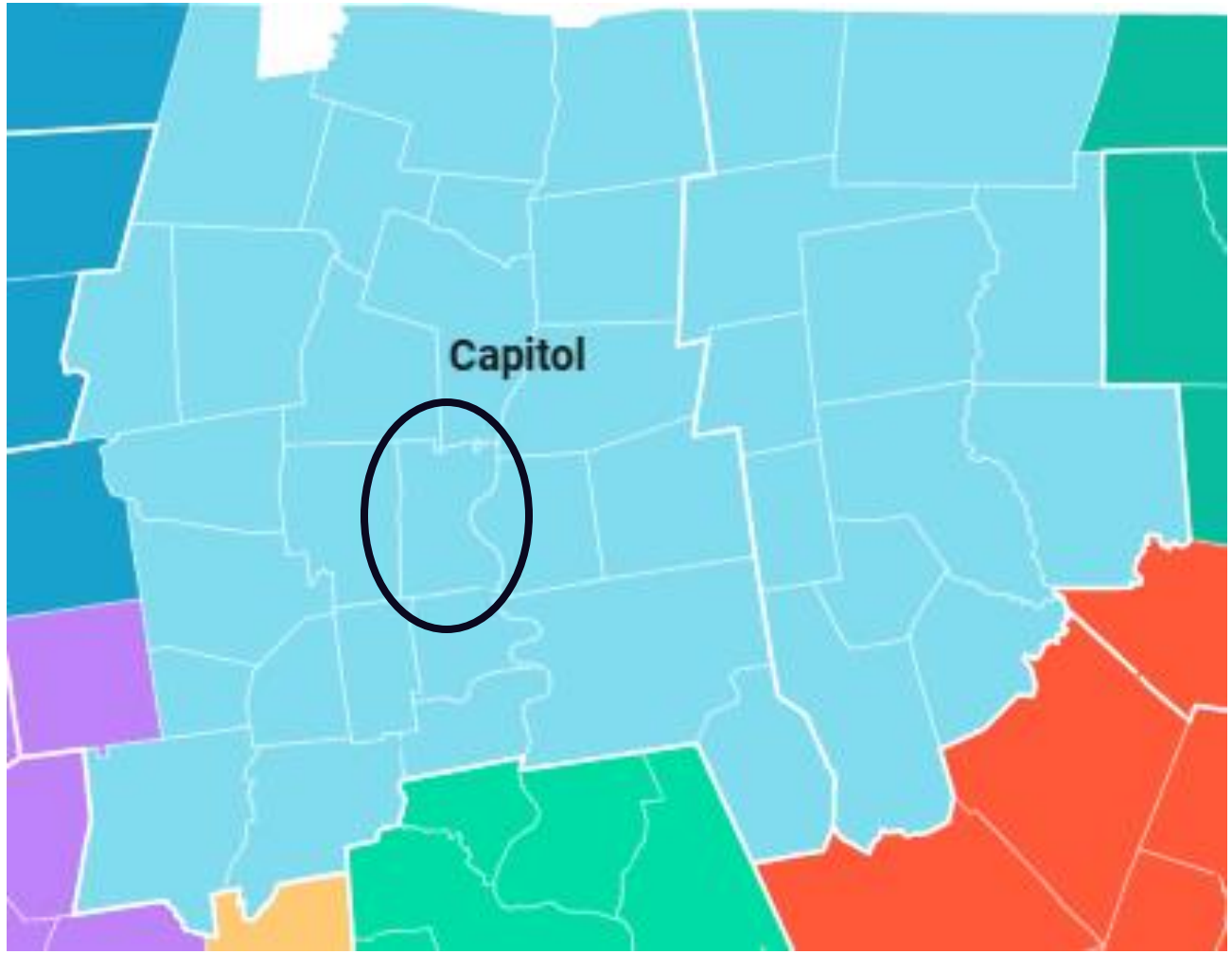
Capitol Planning Region



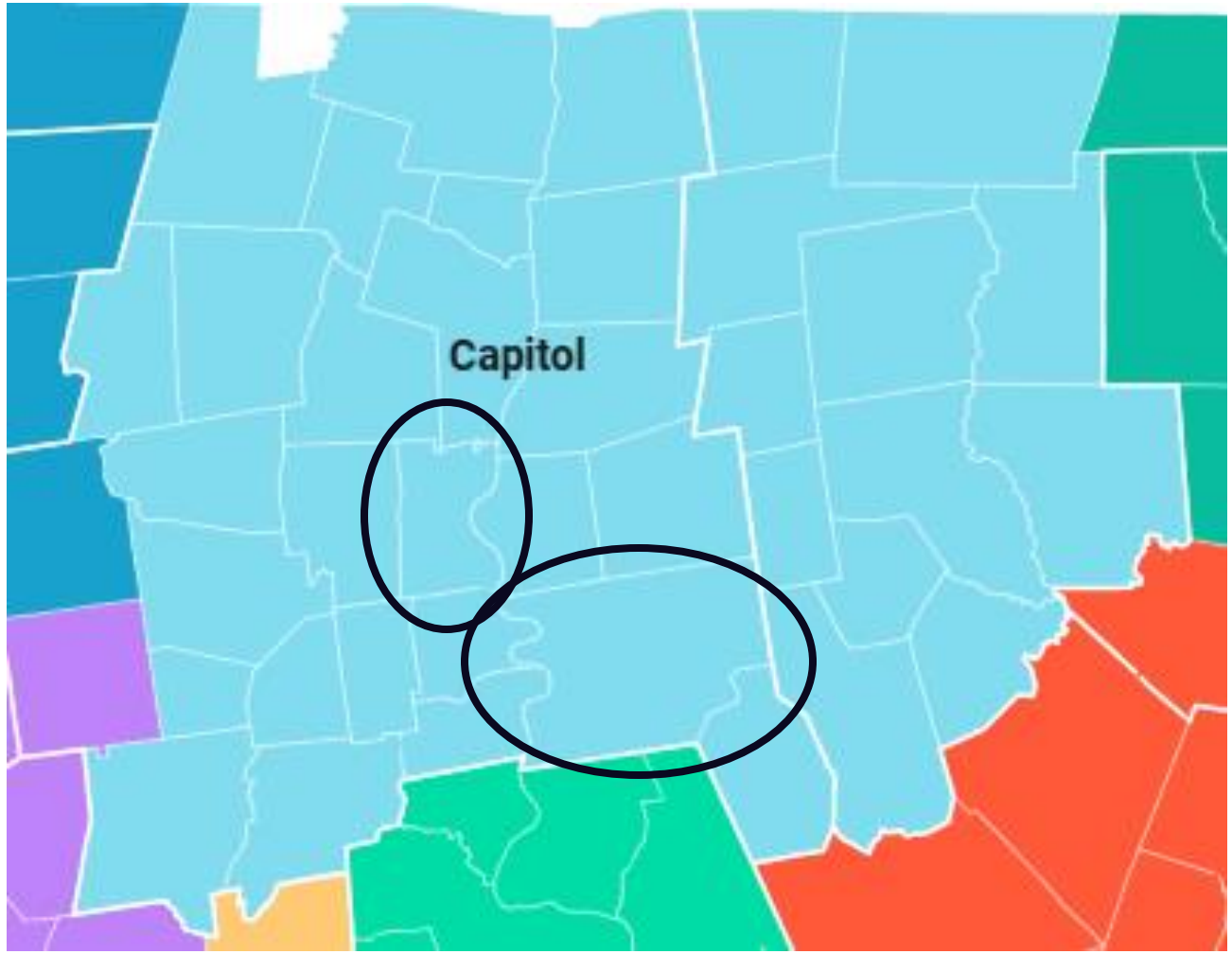
Capitol Planning Region



Capitol Planning Region



Capitol Planning Region



Very Different Towns!

Very Different Towns!

Indicator	Hartford	Glastonbury
Population Density	6,900 people per sq. mile	700 people per sq. mile

Sources: 2024 5-year ACS, 2020 Census, CT DPH

Very Different Towns!

Indicator	Hartford	Glastonbury
Population Density	6,900 people per sq. mile	700 people per sq. mile
Median Household Income	$46k	$157k

Sources: 2024 5-year ACS, 2020 Census, CT DPH

Very Different Towns!

Indicator	Hartford	Glastonbury
Population Density	6,900 people per sq. mile	700 people per sq. mile
Median Household Income	$46k	$157k
Home Value	$229k	$445k

Sources: 2024 5-year ACS, 2020 Census, CT DPH

Very Different Towns!

Indicator	Hartford	Glastonbury
Population Density	6,900 people per sq. mile	700 people per sq. mile
Median Household Income	$46k	$157k
Home Value	$229k	$445k
Homeownership Rate	26%	83%

Sources: 2024 5-year ACS, 2020 Census, CT DPH

Very Different Towns!

Indicator	Hartford	Glastonbury
Population Density	6,900 people per sq. mile	700 people per sq. mile
Median Household Income	$46k	$157k
Home Value	$229k	$445k
Homeownership Rate	26%	83%
Bachelor's or Higher	19%	69%

Data comes from 2024 5-year ACS, 2020 Census, CT DPH

Why group Connecticut's towns?

"What percentage of CT residents are getting their routine health screenings?"

Why group Connecticut's towns?

Summarize data by…	Problem
The whole state	One value that can obscure big differences
Town	169 values. Hard to digest, summarize, or respond to
County / Planning Region	Still hides differences: Hartford vs. Glastonbury?

Why group Connecticut's towns?

With the **6 CTs**, we group towns with similar economic resources so we can compare outcomes and circumstances across the state in a way geography alone can't.



Methods

The Five Connecticuts

2004

UConn's Center for Population Research published the Five Connecticuts
(Levy, Rodriguez, & Villemez, 2004)

Grouped all CT towns using 1990, 2000 Census data

The Five Connecticuts

Complex statistical analysis: factor analysis, cluster analysis, discriminant analysis

2015

Re-updated using 2010 Census data (Levy, D., & DataHaven, 2015)

The Five Connecticuts

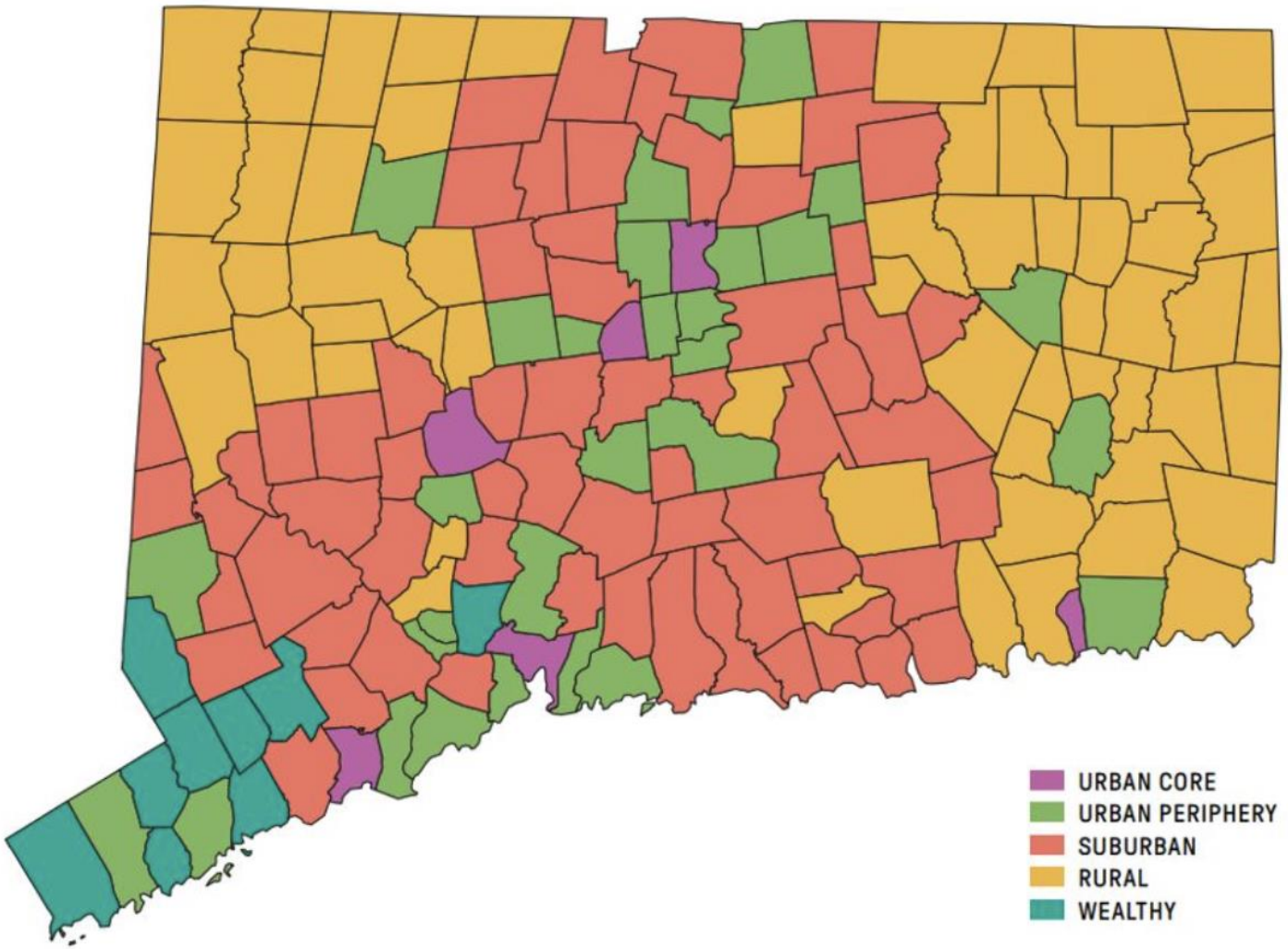
Classification factors

- Family income
- Poverty rate
- Population density

Resulting 5 CTs

- Wealthy
- Suburban
- Rural
- Urban Periphery
- Urban Core

The Five Connecticuts



Source: DataHaven (ctdatahaven.org)

From Five to Six: CTData's approach

We see huge value in the Five CTs framework, but wanted to **revise it for 2026**.

From Five to Six: CTData's approach

In particular:

1. Update with fresher data
2. Use a more straightforward statistical approach
3. Focus on socioeconomic factors only rather than a blend of SES and population density

Latent Profile Analysis (LPA)

Statistical method for finding **underlying subgroups** ("latent profiles") within a dataset

Profiles defined by a mean & variance on each measure included in the model

Each case's probability of membership in each profile is calculated

Advantages of LPA

1. Unitary method, rather than 3 methods combined (factor, cluster, & discriminant analysis)
2. Tests of model fit guide selection of the number of profiles
3. Membership probabilities show the uncertainty in profile assignments

Measures we included in the LPA

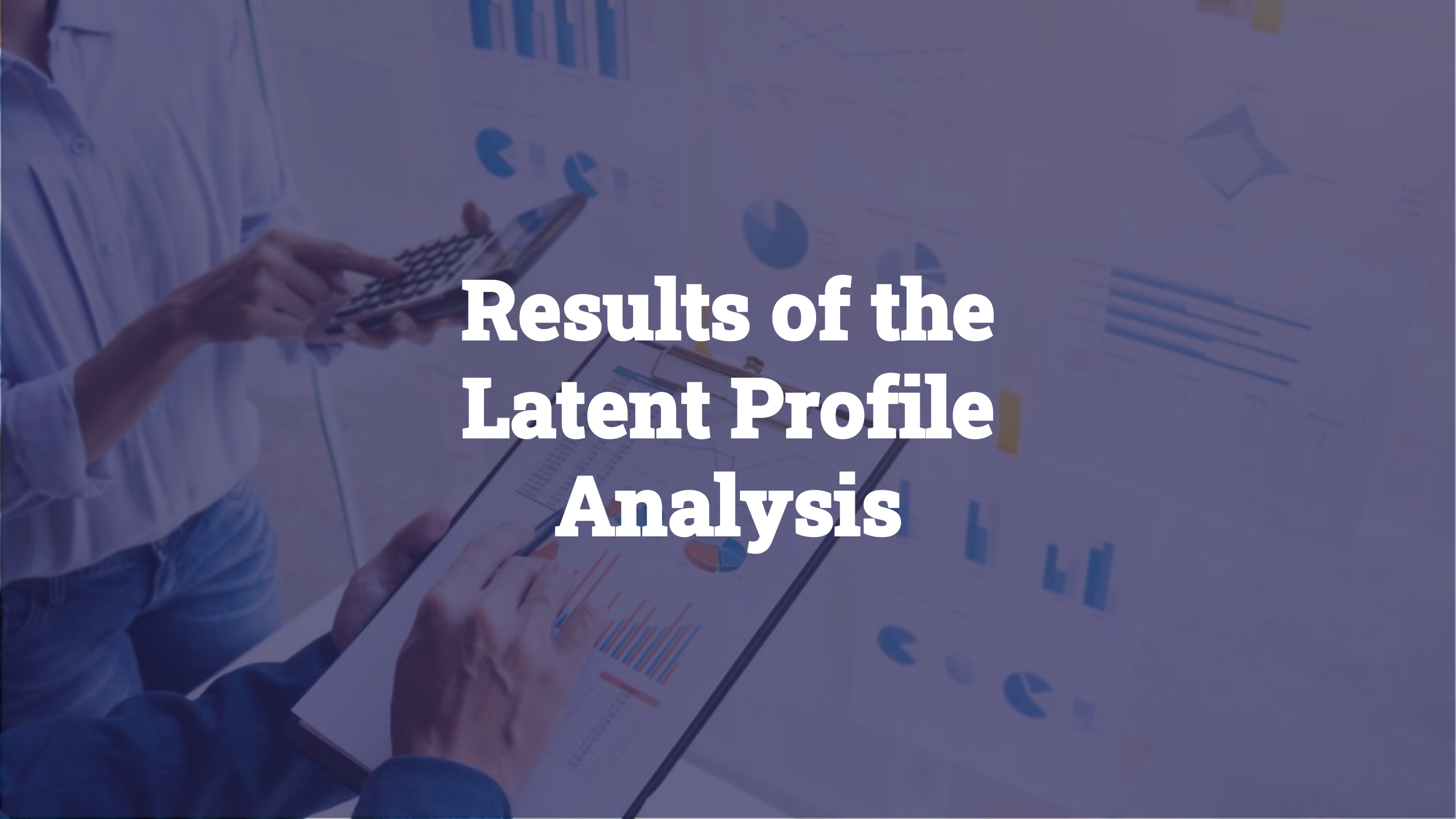
Indicator	Source
Median household income	2020-2024 ACS 5-year estimates
Educational attainment	
Above-poverty rate	
Median home value	
Homeownership rate	
Employment rate	CT Department of Labor

LPA Model Fitting & Selection

1. Used Python package StepMix

2. Selected a 6-profile solution based on:
   - **Model stability**
   - **Relative fit criteria**
   - **Meaningfulness of the solution**

3. Assigned towns to the profile for which they had the highest membership probability



Results of the Latent Profile Analysis

Profile Names

Lowest
Economic Resources

Low
Economic Resources

Mixed
Economic Resources

Moderate
Economic Resources

High
Economic Resources

Highest
Economic Resources

ER = Economic Resources

Average Characteristics of Each Group

Means of all towns within each group. Darker shading means a higher value within that column.

	Household Income	Above Poverty	Bachelor's or Higher	Homeownership Rate	Home Value	Employment Rate
Lowest ER	$58,120	79%	23%	43%	$239,756	95.8%
Low ER	$84,370	90%	29%	67%	$270,189	96.6%
Mixed ER	$99,931	90%	49%	67%	$453,159	97.3%
Moderate ER	$111,417	95%	41%	84%	$361,058	97.2%
High ER	$143,494	96%	59%	88%	$496,518	97.5%
Highest ER	$224,732	96%	77%	85%	$1,206,722	97.4%

ER = Economic Resources

Average Characteristics of Each Group

Means of all towns within each group. Darker shading means a higher value within that column.

	Household Income	Above Poverty	Bachelor's or Higher	Homeownership Rate	Home Value	Employment Rate
Lowest ER	$58,120	79%	23%	43%	$239,756	95.8%
Low ER	$84,370	90%	29%	67%	$270,189	96.6%
Mixed ER	$99,931	90%	49%	67%	$453,159	97.3%
Moderate ER	$111,417	95%	41%	84%	$361,058	97.2%
High ER	$143,494	96%	59%	88%	$496,518	97.5%
Highest ER	$224,732	96%	77%	85%	$1,206,722	97.4%

ER = Economic Resources

Average Characteristics of Each Group

Means of all towns within each group. Darker shading means a higher value within that column.

	Household Income	Above Poverty	Bachelor's or Higher	Homeownership Rate	Home Value	Employment Rate
Lowest ER	$58,120	79%	23%	43%	$239,756	95.8%
Low ER	$84,370	90%	29%	67%	$270,189	96.6%
Mixed ER	$99,931	90%	49%	67%	$453,159	97.3%
Moderate ER	$111,417	95%	41%	84%	$361,058	97.2%
High ER	$143,494	96%	59%	88%	$496,518	97.5%
Highest ER	$224,732	96%	77%	85%	$1,206,722	97.4%

ER = Economic Resources

Average Characteristics of Each Group

Means of all towns within each group. Darker shading means a higher value within that column.

	Household Income	Above Poverty	Bachelor's or Higher	Homeownership Rate	Home Value	Employment Rate
Lowest ER	$58,120	79%	23%	43%	$239,756	95.8%
Low ER	$84,370	90%	29%	67%	$270,189	96.6%
Mixed ER	$99,931	90%	49%	67%	$453,159	97.3%
Moderate ER	$111,417	95%	41%	84%	$361,058	97.2%
High ER	$143,494	96%	59%	88%	$496,518	97.5%
Highest ER	$224,732	96%	77%	85%	$1,206,722	97.4%

ER = Economic Resources

Average Characteristics of Each Group

Means of all towns within each group. Darker shading means a higher value within that column.

	Household Income	Above Poverty	Bachelor's or Higher	Homeownership Rate	Home Value	Employment Rate
Lowest ER	$58,120	79%	23%	43%	$239,756	95.8%
Low ER	$84,370	90%	29%	67%	$270,189	96.6%
Mixed ER	$99,931	90%	49%	67%	$453,159	97.3%
Moderate ER	$111,417	95%	41%	84%	$361,058	97.2%
High ER	$143,494	96%	59%	88%	$496,518	97.5%
Highest ER	$224,732	96%	77%	85%	$1,206,722	97.4%

ER = Economic Resources

Average Characteristics of Each Group

Means of all towns within each group. Darker shading means a higher value within that column.

	Household Income	Above Poverty	Bachelor's or Higher	Homeownership Rate	Home Value	Employment Rate
Lowest ER	$58,120	79%	23%	43%	$239,756	95.8%
Low ER	$84,370	90%	29%	67%	$270,189	96.6%
Mixed ER	$99,931	90%	49%	67%	$453,159	97.3%
Moderate ER	$111,417	95%	41%	84%	$361,058	97.2%
High ER	$143,494	96%	59%	88%	$496,518	97.5%
Highest ER	$224,732	96%	77%	85%	$1,206,722	97.4%

ER = Economic Resources

Average Characteristics of Each Group

Means of all towns within each group. Darker shading means a higher value within that column.

	Household Income	Above Poverty	Bachelor's or Higher	Homeownership Rate	Home Value	Employment Rate
Lowest ER	$58,120	79%	23%	43%	$239,756	95.8%
Low ER	$84,370	90%	29%	67%	$270,189	96.6%
Mixed ER	$99,931	90%	49%	67%	$453,159	97.3%
Moderate ER	$111,417	95%	41%	84%	$361,058	97.2%
High ER	$143,494	96%	59%	88%	$496,518	97.5%
Highest ER	$224,732	96%	77%	85%	$1,206,722	97.4%

ER = Economic Resources

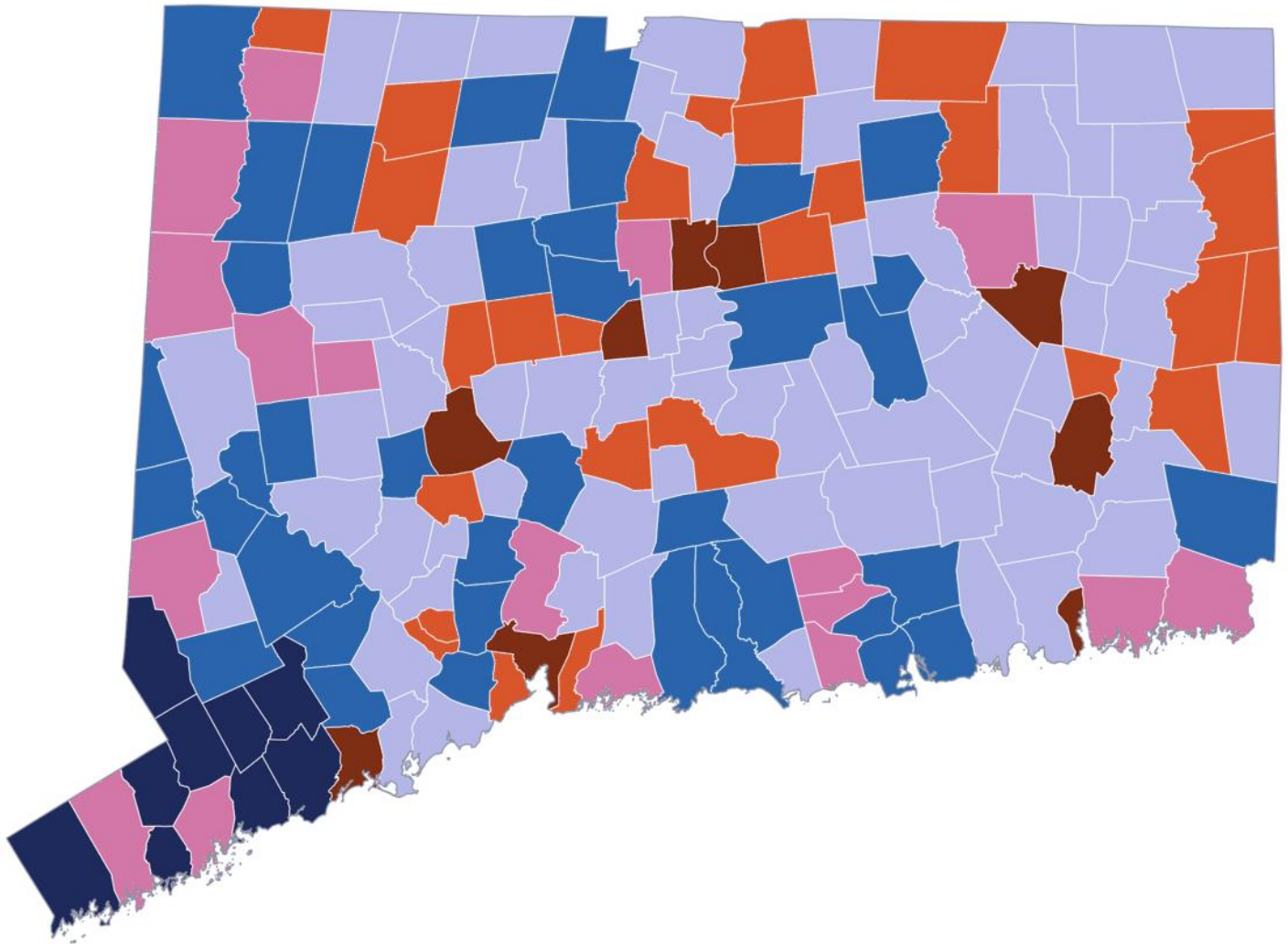
Profile Membership Probabilities

Profile	Average Membership Probability	Share of Towns Below 75% Probability
Lowest ER	99%	0%
Low ER	97%	4%
Mixed ER	90%	12%
Moderate ER	92%	12%
High ER	96%	8%
Highest ER	96%	11%

ER = Economic Resources

The Six Connecticuts

Lowest ER	Low ER	Mixed ER	Moderate ER	High ER	Highest ER
9 towns	27 towns	17 towns	69 towns	38 towns	9 towns



Source: CTData Collaborative analysis of 2024 ACS 5-Year Estimates

Six vs. Five Connecticuts

	Urban Core	Urban Periphery	Rural	Suburban	Wealthy
Lowest ER	6	3	–	–	–
Low ER	–	15	12	–	–
Mixed ER	–	7	8	2	–
Moderate ER	–	5	34	30	–
High ER	–	–	6	31	1
Highest ER	–	–	–	1	8

Differences among the Six CTs

Findings across economics, demographics, housing, and health

Methods: How we compared the Six CTs

1 Data

Public town-level data for CT's 169 towns.

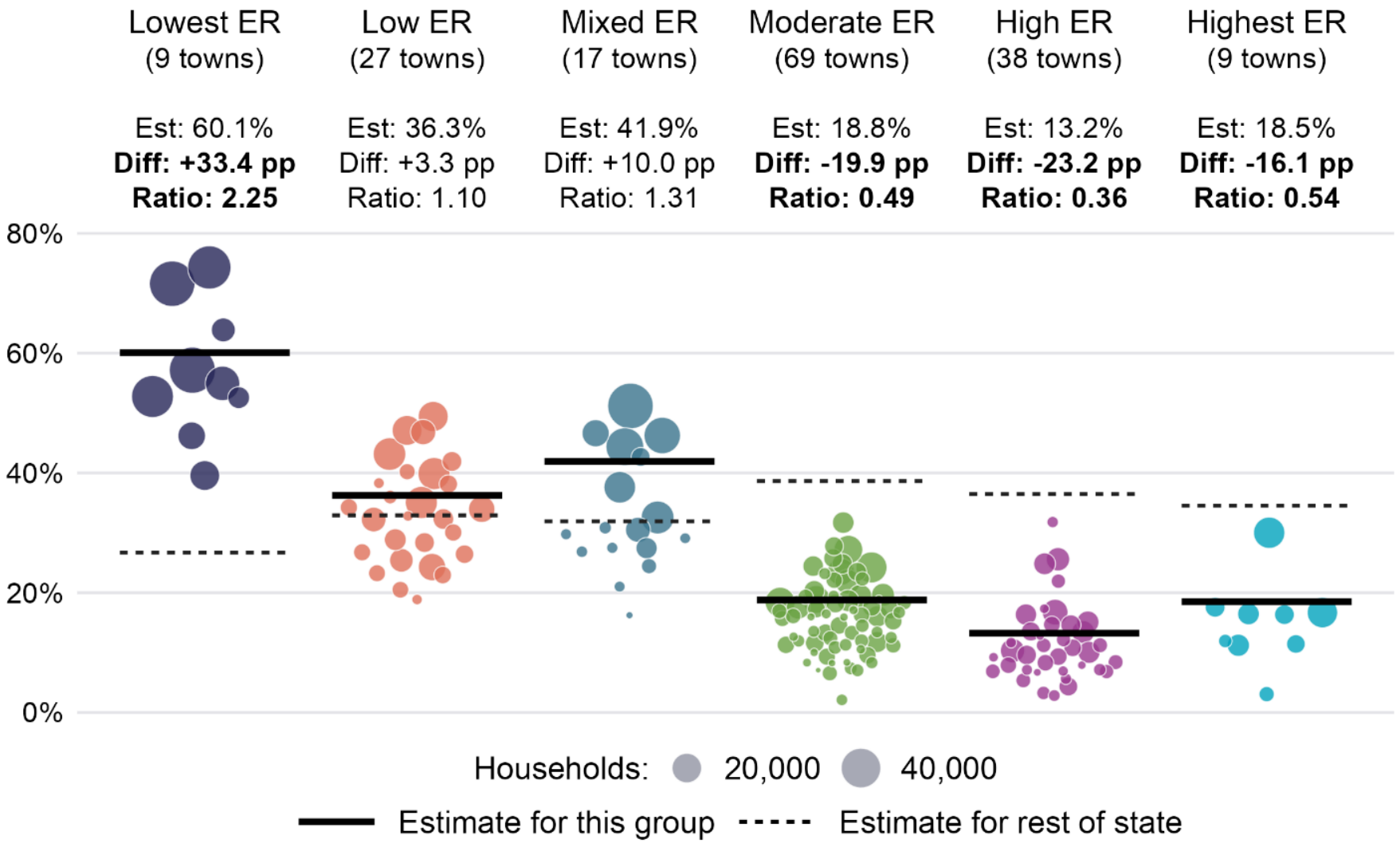
2 Comparison

Compared each of the 6 CT profiles to all the towns not in that profile.

3 Averages

Calculated each profile average, **weighted by town size**.

Renter Occupied Housing Units



Notes: Each bubble represents a town. Differences (pp = percentage points) and ratios compare each group's estimate with the rest of the state. Bold text indicates a significant difference from the rest of the state.
Source: ACS 2020-2024 5-year estimates, Tables B25003 and B25002

Town is the unit of analysis

bubbles = towns

solid line = average for that profile

dotted line = average for rest of the state

Methods: How we compared the Six CTs

Weighted regression on whether each town is in the profile vs. rest of state

90% confidence threshold

Corrected significance thresholds for multiple comparisons



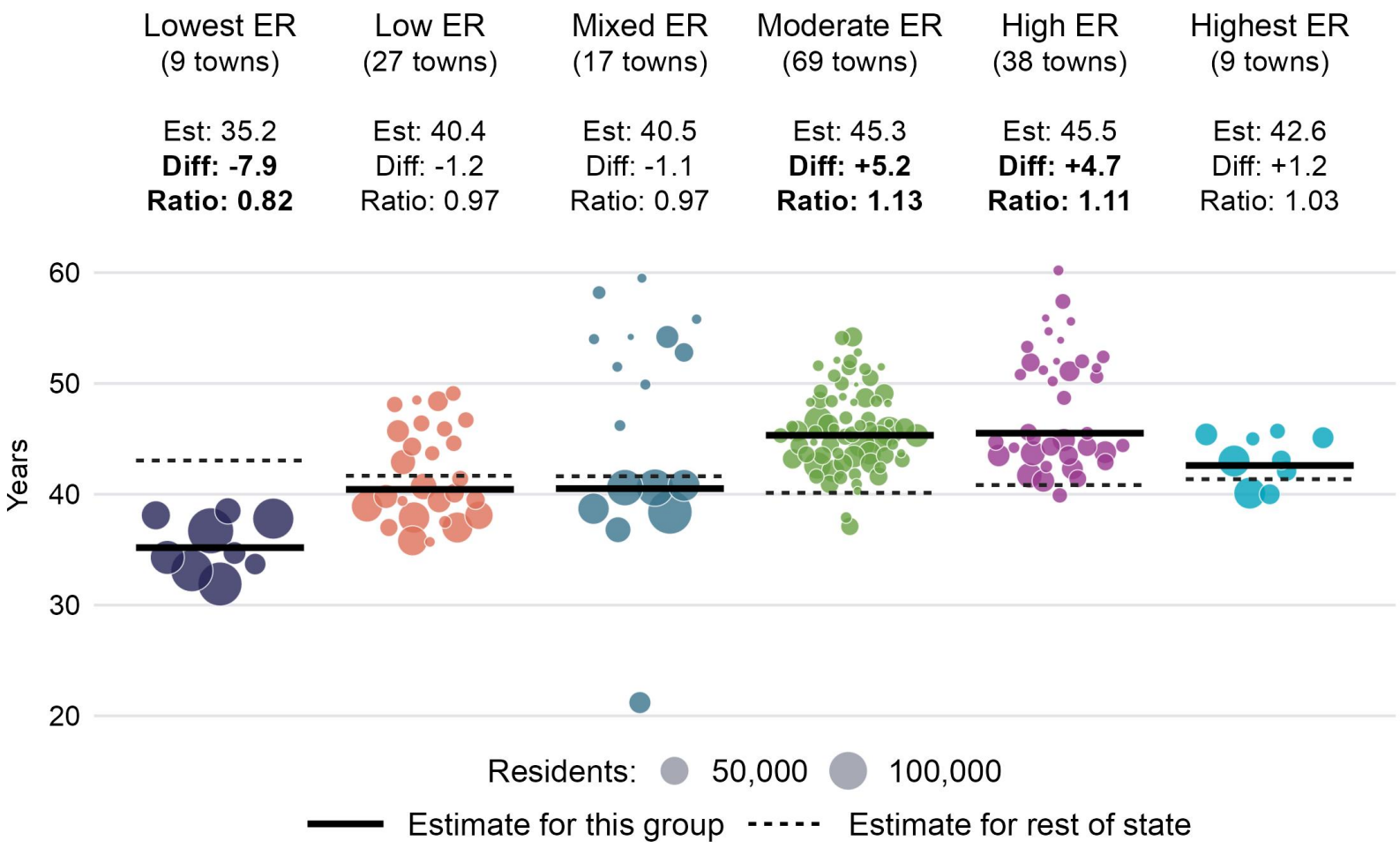
Demographics and Economics

Lowest ER CT is 9 towns, but a fifth of the state

Group	Towns	Total population	Share of state
Lowest ER	9	736,198	20%
Low ER	27	649,146	18%
Mixed ER	17	580,634	16%
Moderate ER	69	921,413	25%
High ER	38	477,559	13%
Highest ER	9	259,558	7%
Connecticut	169	3,624,508	100%

Source: ACS 2020-2024 5-year estimates

Median age

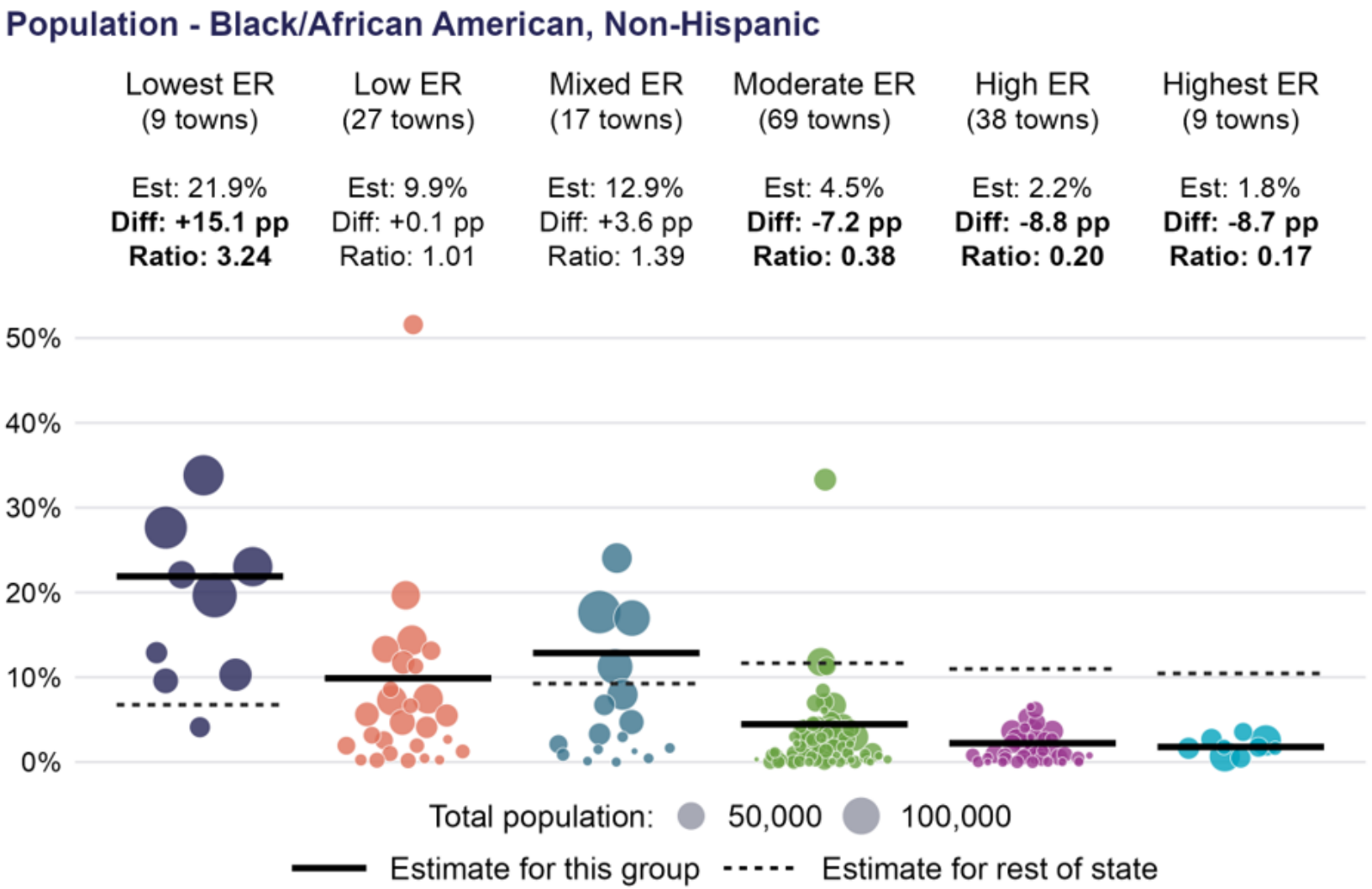


Notes: Each bubble represents a town. Differences and ratios compare each group's estimate with the rest of the state. Bold text indicates a significant difference from the rest of the state.
Source: ACS 2020-2024 5-year estimates, Table S0101

The Lowest ER has the lowest median age, at **35 years old**.

Moderate and High ER are significantly older than the rest of the state.

Black, non-Hispanic

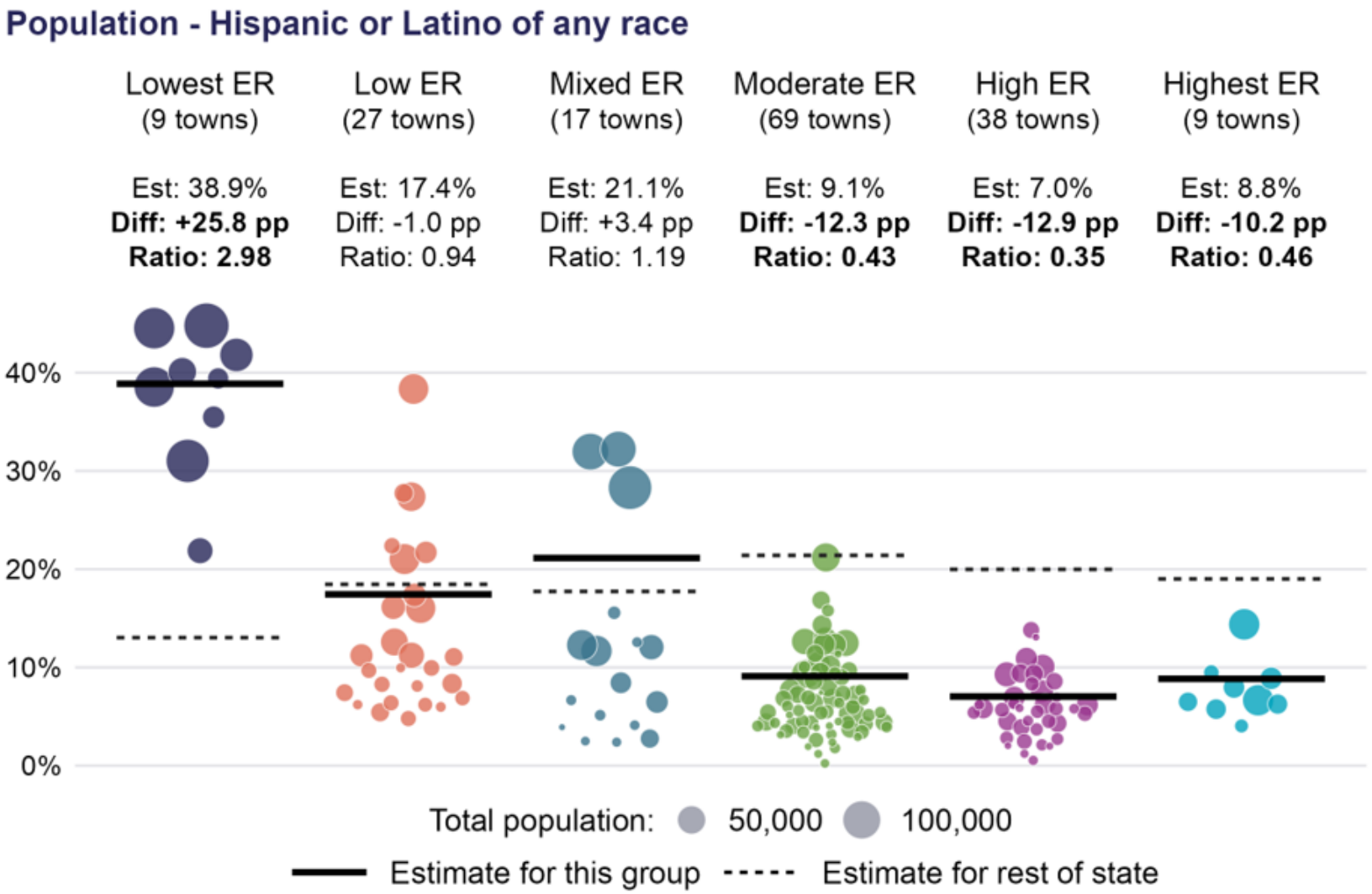


Notes: Each bubble represents a town. Differences (pp = percentage points) and ratios compare each group's estimate with the rest of the state. Bold text indicates a significant difference from the rest of the state.
Source: ACS 2020-2024 5-year estimates, Table B03002

Residents in the Lowest ER group are **more than 3x** as likely to be Black, non-Hispanic.

Much lower share in the Moderate, High, and Highest ER groups.

Hispanic or Latino



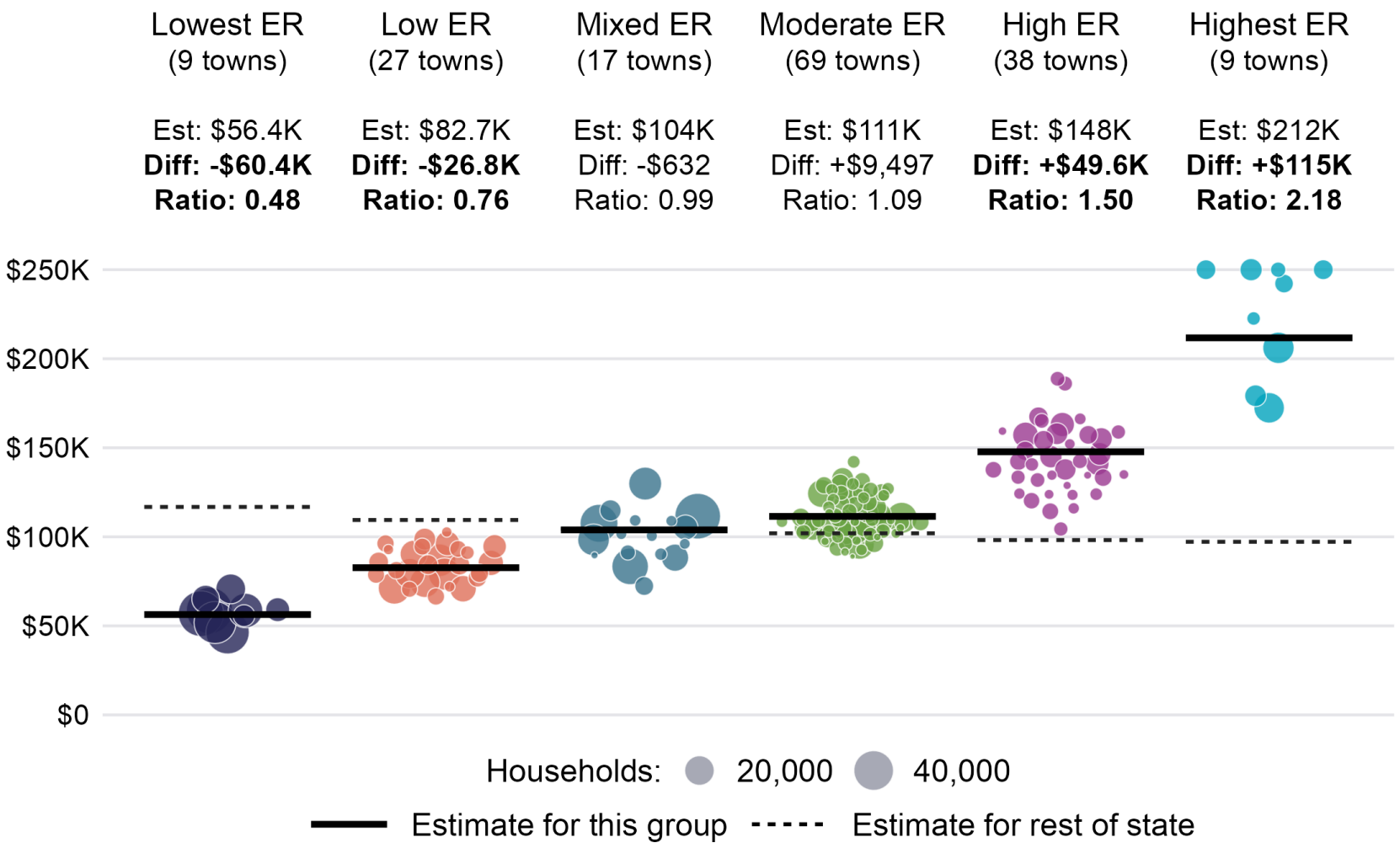
Notes: Each bubble represents a town. Differences (pp = percentage points) and ratios compare each group's estimate with the rest of the state. Bold text indicates a significant difference from the rest of the state.
Source: ACS 2020-2024 5-year estimates, Table B03002

Residents in the Lowest ER group are **about 3x** as likely to be Latino.

Much lower share in the Moderate, High, and Highest ER groups.

Median Household Income

Median Household Income



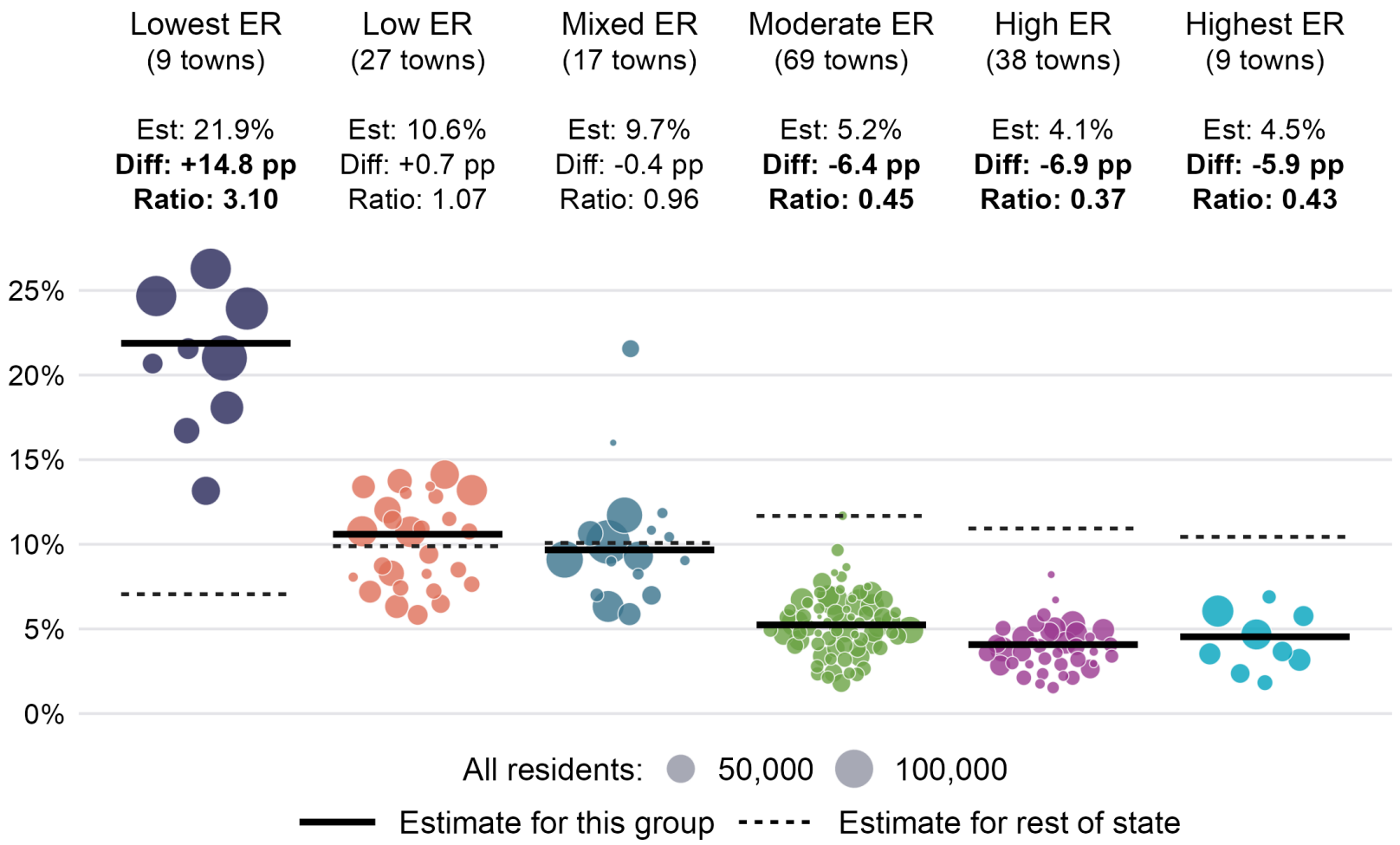
Notes: Each bubble represents a town. Differences and ratios compare each group's estimate with the rest of the state. Bold text indicates a significant difference from the rest of the state.
Source: ACS 2020-2024 5-year estimates, Table B19013

Lowest ER is **less than half** that of the rest of the state.

Highest ER is **more than double**.

Poverty

Poverty Status



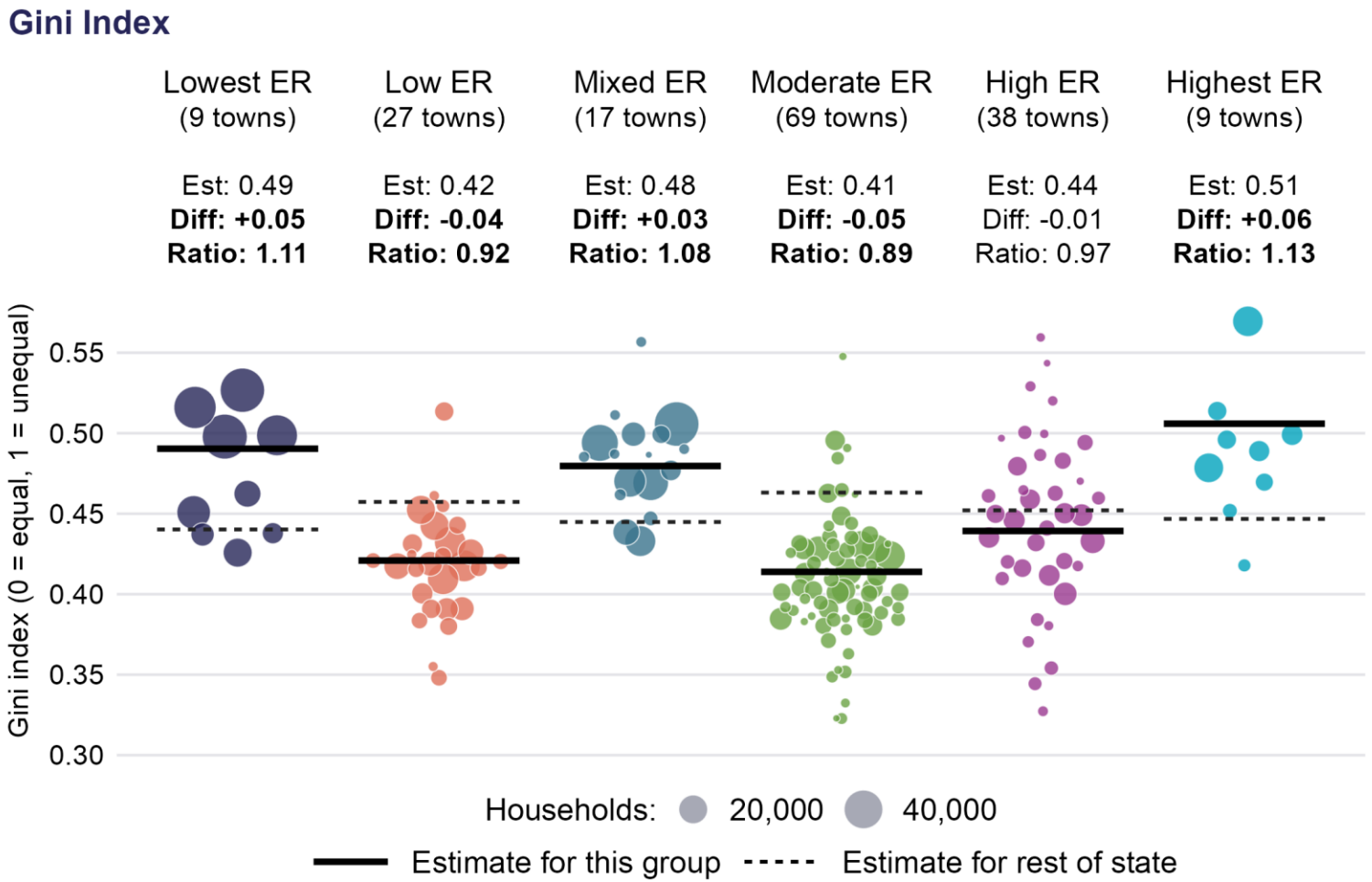
Lowest ER has **3x** the poverty of the rest of the state.

Notes: Each bubble represents a town. Differences (pp = percentage points) and ratios compare each group's estimate with the rest of the state. Bold text indicates a significant difference from the rest of the state.
Source: ACS 2020-2024 5-year estimates, Table B17001

Within-town inequality

Gini index: higher values mean more within-town inequality.

Lowest, Mixed, and Highest ER towns have the highest levels of inequality.



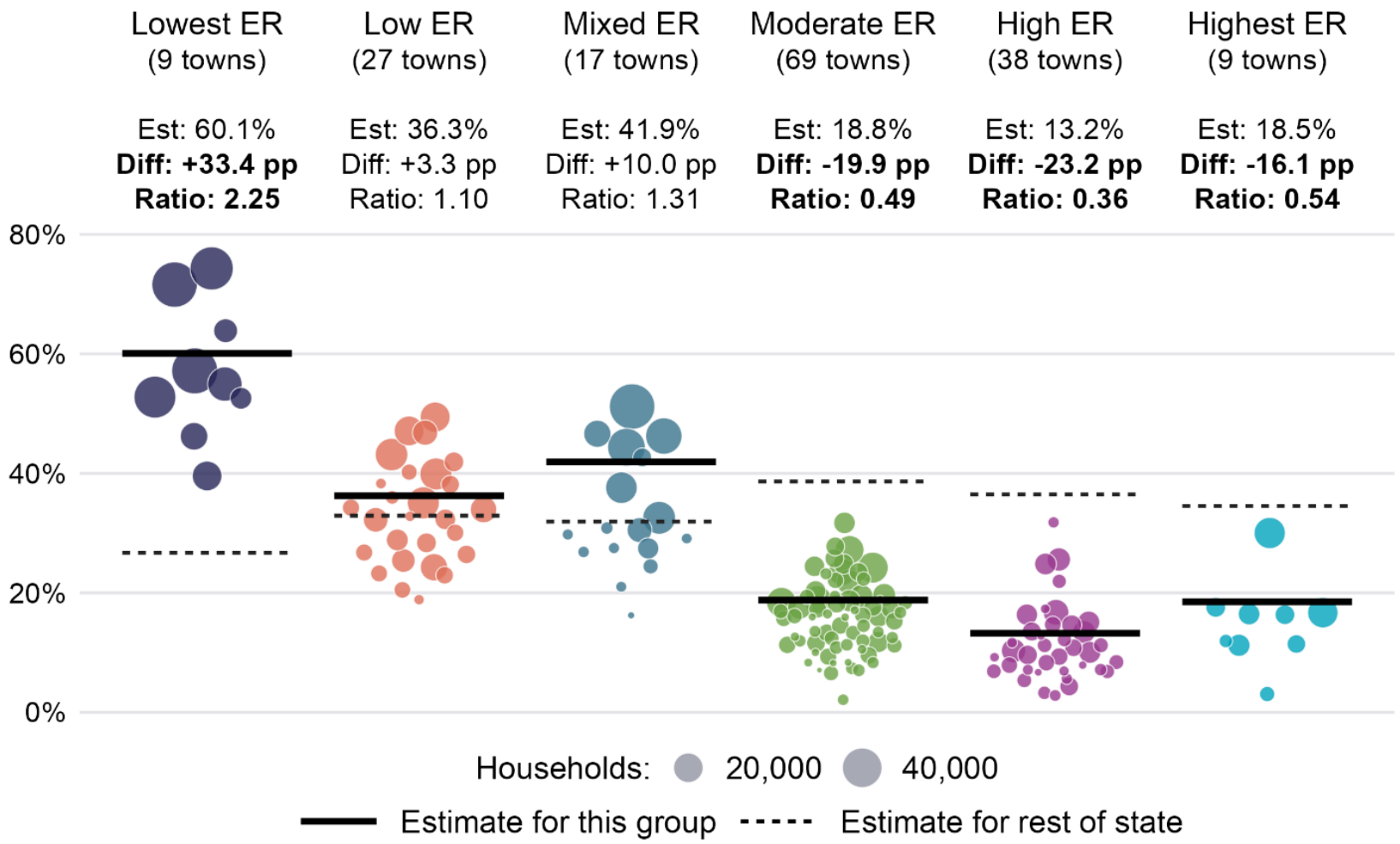
Notes: Each bubble represents a town. Differences and ratios compare each group's estimate with the rest of the state. Bold text indicates a significant difference from the rest of the state.
Source: ACS 2020-2024 5-year estimates, Table B19083



Housing

Renters

Renter Occupied Housing Units

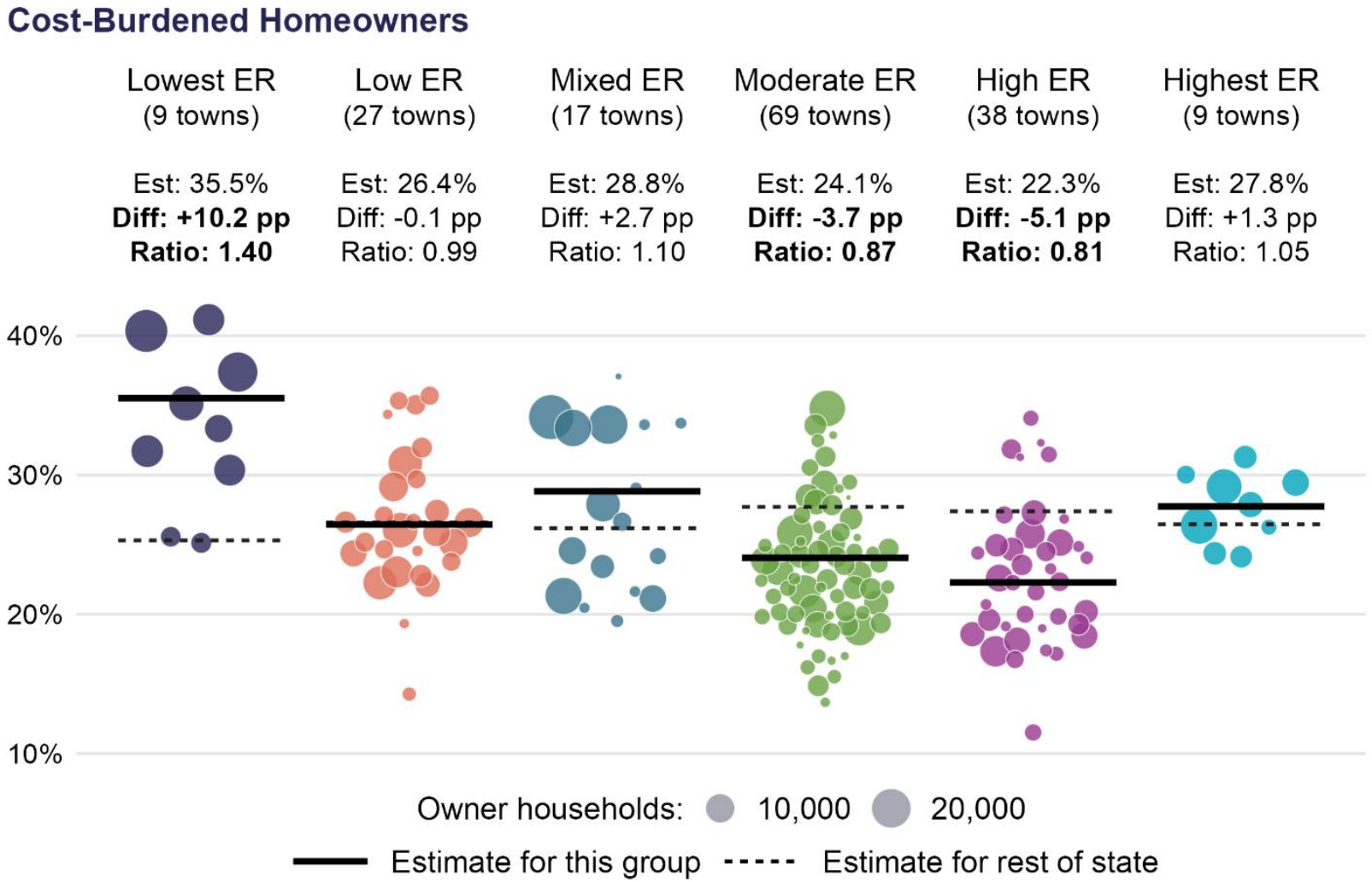


Notes: Each bubble represents a town. Differences (pp = percentage points) and ratios compare each group's estimate with the rest of the state. Bold text indicates a significant difference from the rest of the state.
Source: ACS 2020-2024 5-year estimates, Tables B25003 and B25002

60% of housing units are renter-occupied in the Lowest ER.

In the High ER, only **13%** are.

Cost-burdened households



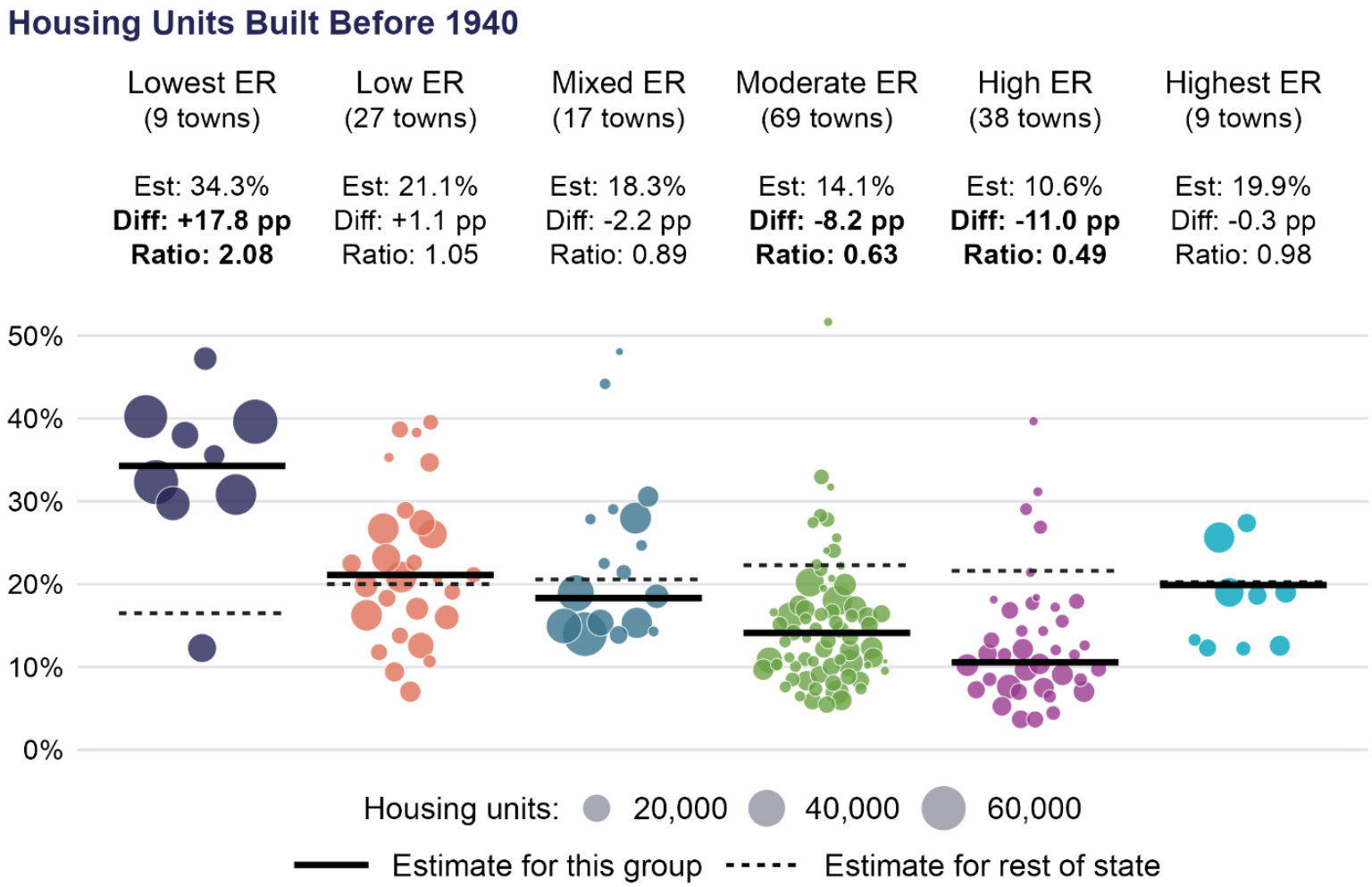
Notes: Each bubble represents a town. Differences (pp = percentage points) and ratios compare each group's estimate with the rest of the state. Bold text indicates a significant difference from the rest of the state.
Source: ACS 2020-2024 5-year estimates, Table B25091

Lowest ER households are cost-burdened at **1.4x** the rate of the rest of the state.

The Highest ER doesn't differ significantly from the rest of the state.

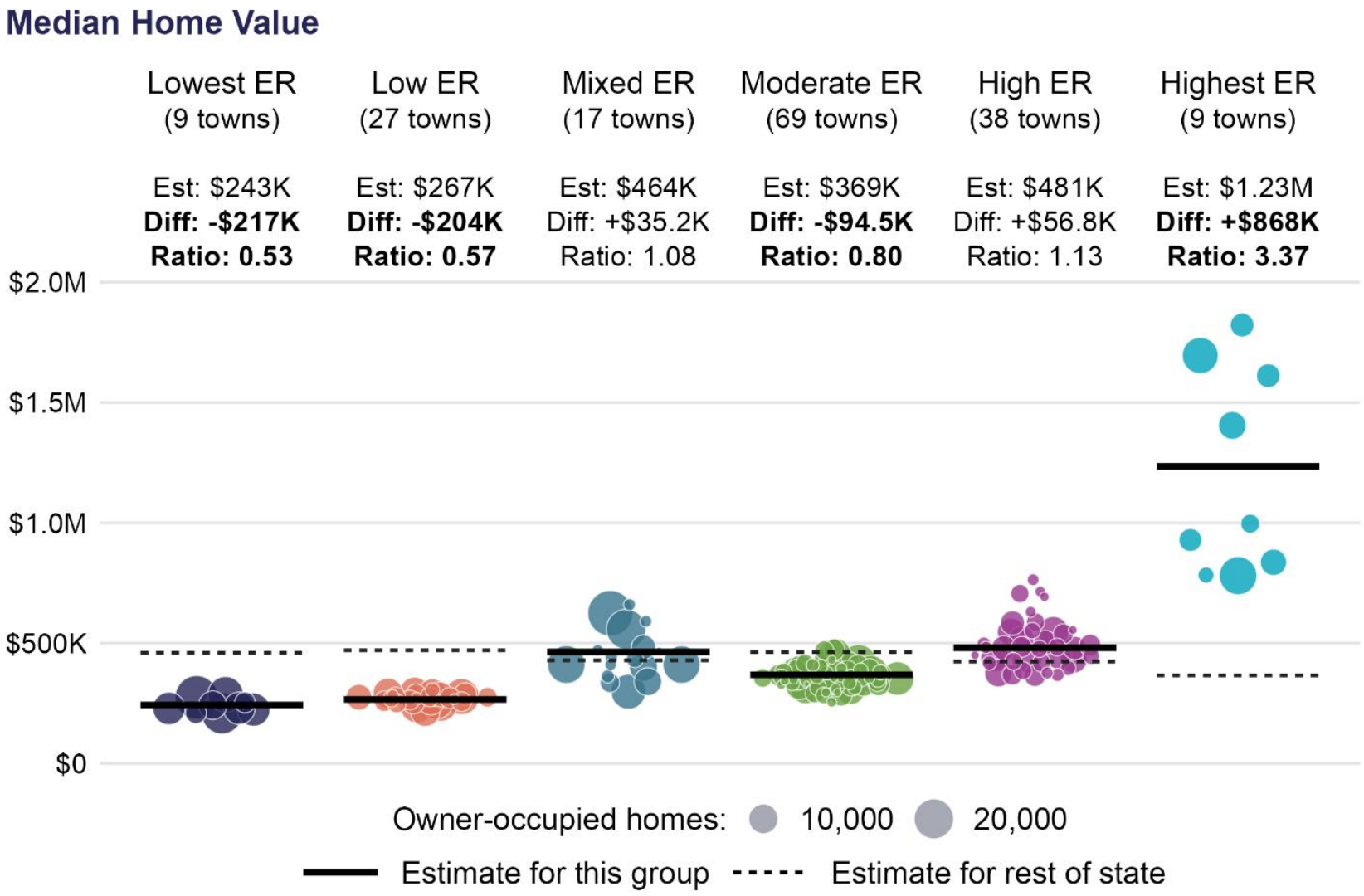
Building age: proportion of older homes

34% of homes in the Lowest ER were built before 1940, **2x** the rest of the state.



Notes: Each bubble represents a town. Differences (pp = percentage points) and ratios compare each group's estimate with the rest of the state. Bold text indicates a significant difference from the rest of the state.
Source: ACS 2020-2024 5-year estimates, Tables B25034 and B25002

Home values



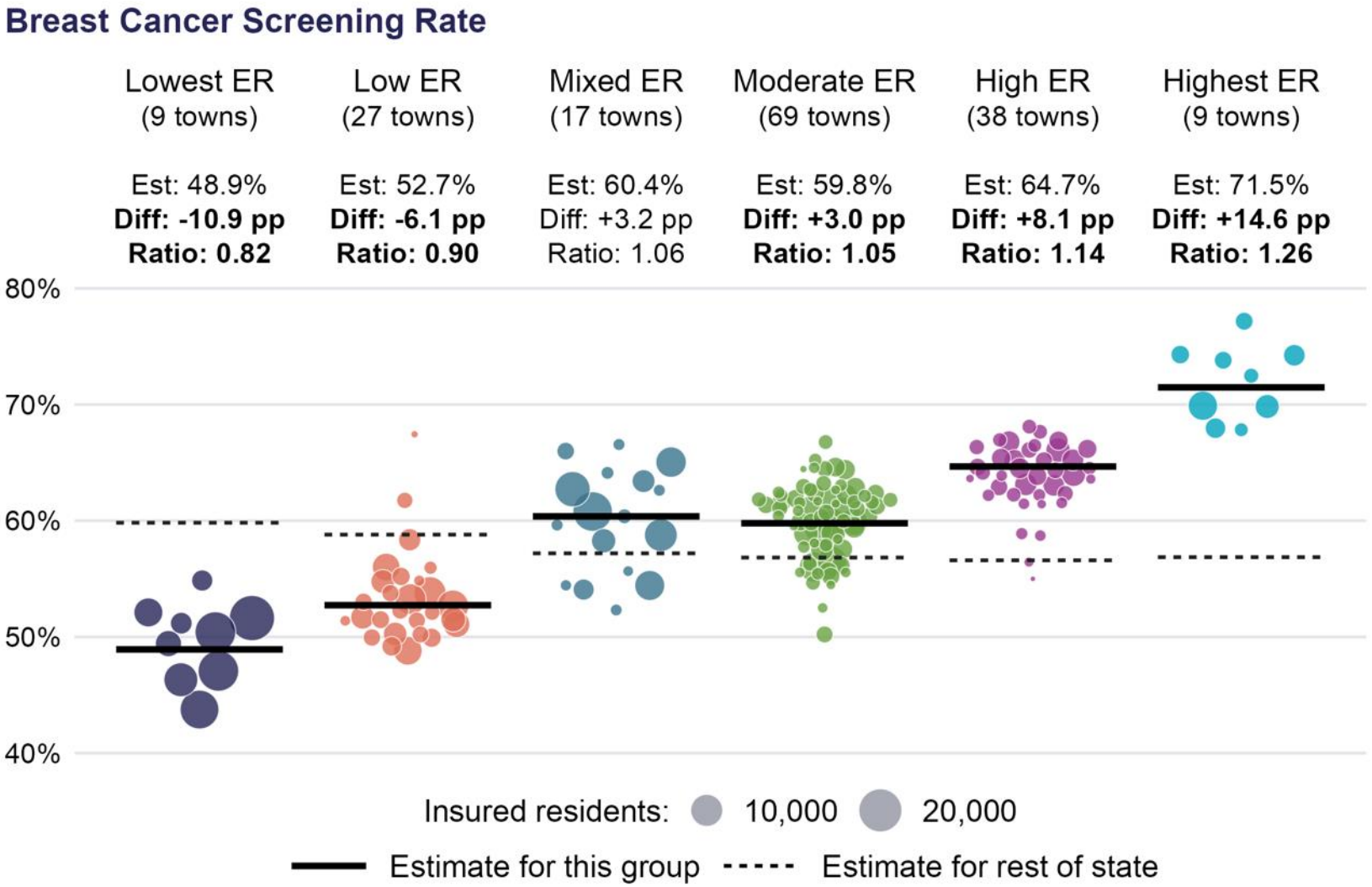
Notes: Each bubble represents a town. Differences and ratios compare each group's estimate with the rest of the state. Bold text indicates a significant difference from the rest of the state.
Source: ACS 2020-2024 5-year estimates, Table B25077

Home values vary across the state, but Highest ER is clearly unique.

Median home values are **over 3x** those in the rest of the state.


Health

Breast cancer screening rate

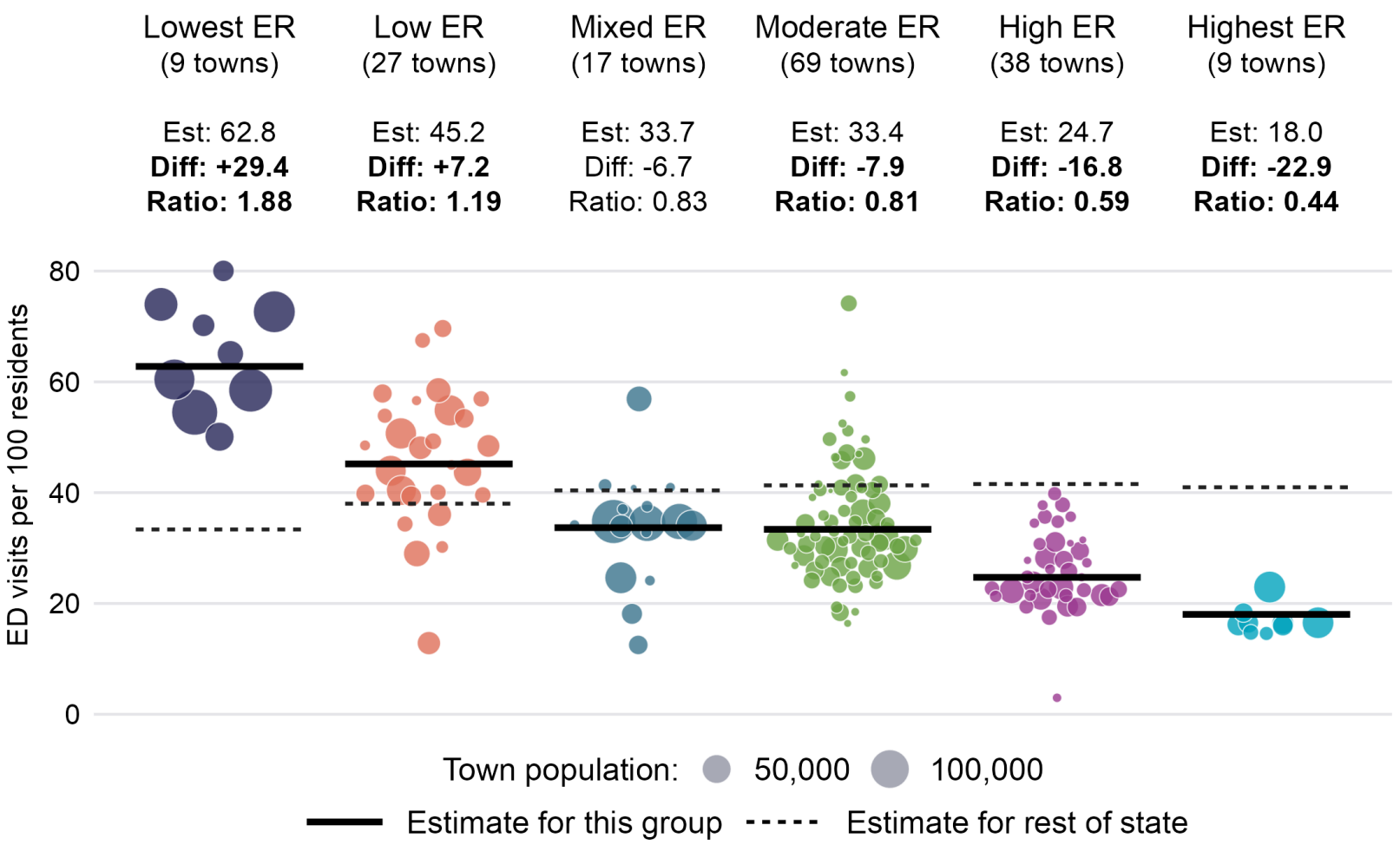


Notes: Each bubble represents a town. Differences (pp = percentage points) and ratios compare each group's estimate with the rest of the state. Bold text indicates a significant difference from the rest of the state.
Source: CT APCD

Lowest ER residents and Low ER residents receive screenings at a **lower rate** than the rest of the state.

Emergency Room visits

Emergency Department Use

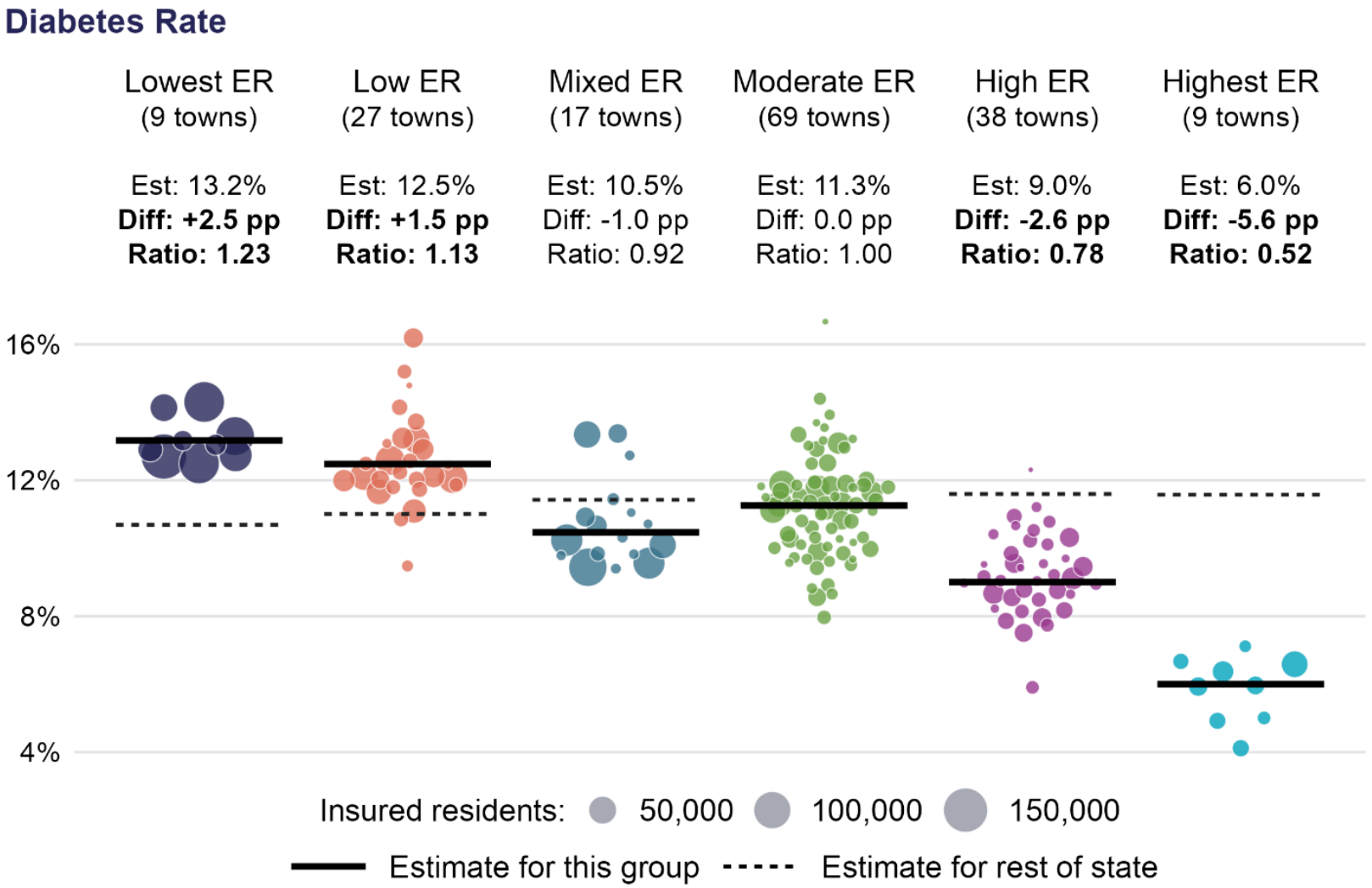


Notes: Each bubble represents a town. Differences and ratios compare each group's estimate with the rest of the state. Bold text indicates a significant difference from the rest of the state.

Source: CT OHS, CHIME Data

Lowest ER towns see **nearly twice** as many Emergency Room visits per capita as the rest of the state.

Diabetes Rate

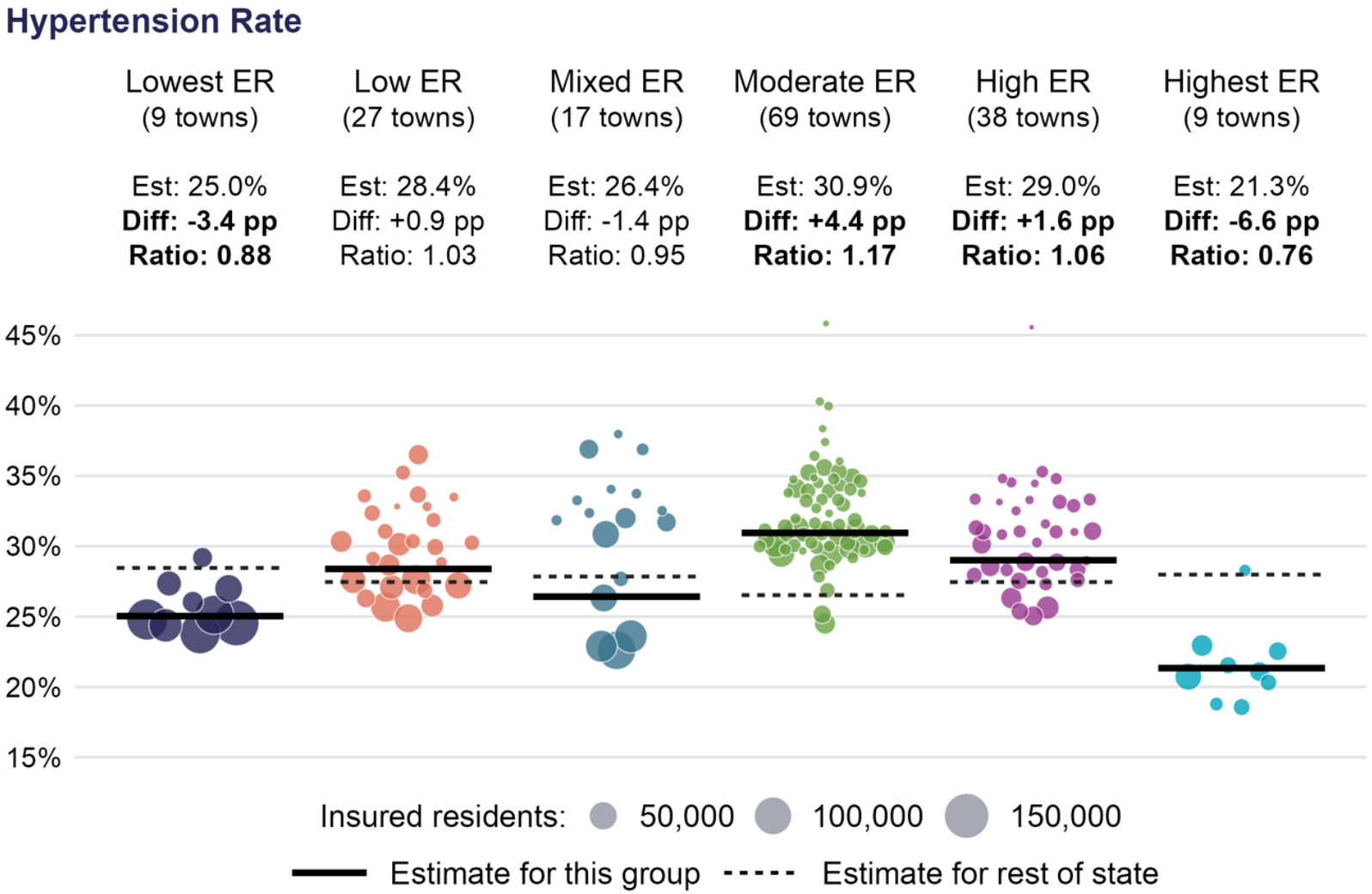


Notes: Each bubble represents a town. Differences (pp = percentage points) and ratios compare each group's estimate with the rest of the state. Bold text indicates a significant difference from the rest of the state.
Source: CT APCD

Those in the Highest ER are diagnosed with diabetes at **roughly half** the rate of the rest of the state.

The Lowest ER has a **23%** higher rate than the rest of the state.

Hypertension rate



Notes: Each bubble represents a town. Differences (pp = percentage points) and ratios compare each group's estimate with the rest of the state. Bold text indicates a significant difference from the rest of the state.
Source: CT APCD

Hypertension follows a different curve.

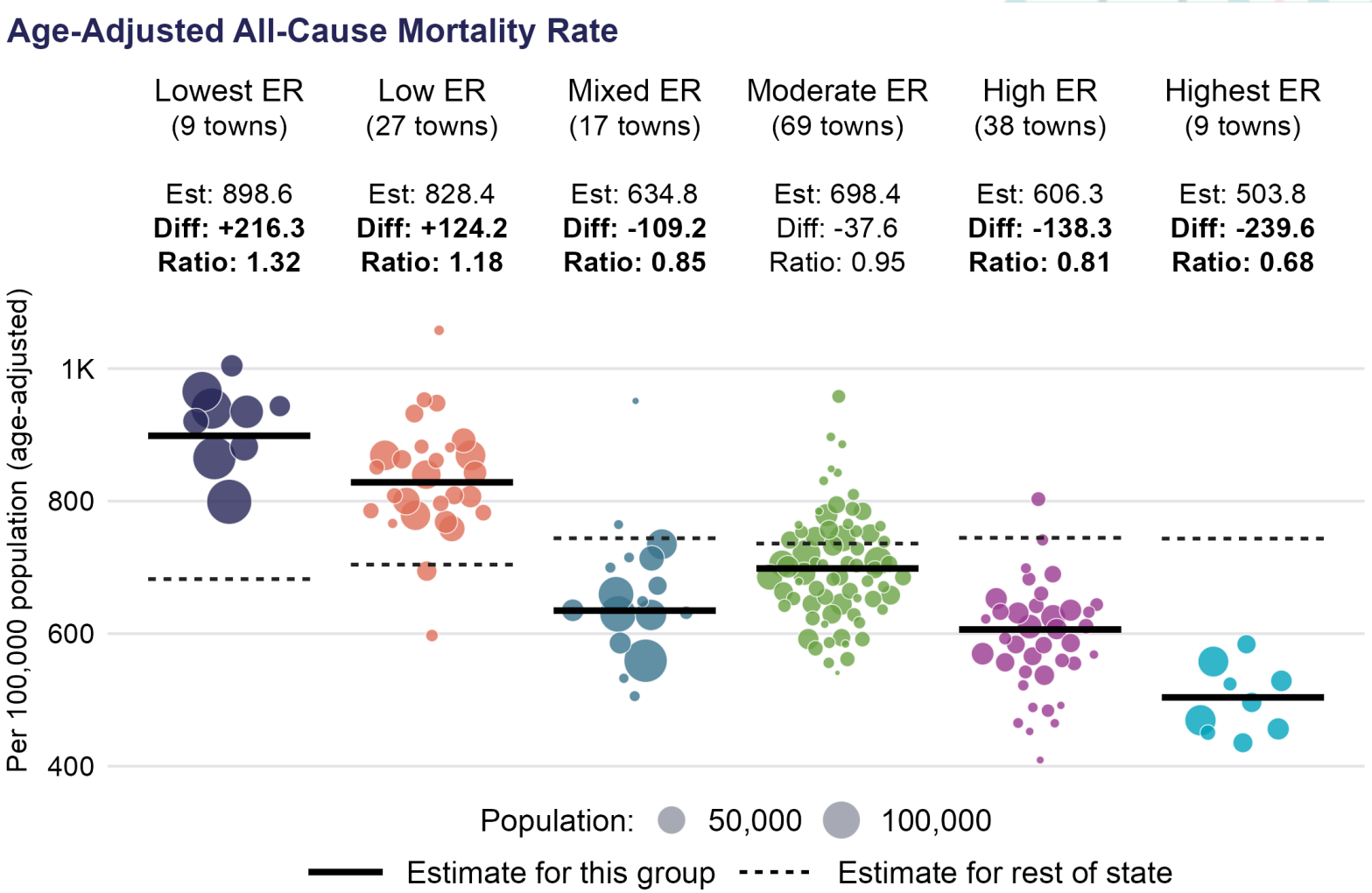
The Lowest ER has a **lower rate** than the rest of the state.

Moderate and High ER have the highest rates.

Mortality rate

Age-adjusted all-cause mortality is **32%** higher than the rest of the state in the Lowest ER.

Lowest ER has **1.8x** the mortality rate of Highest ER.



Notes: Each bubble represents a town. Differences and ratios compare each group's estimate with the rest of the state. Bold text indicates a significant difference from the rest of the state.
Source: CT DPH Five-year AAMR, 2018-2022

How to Use the Six CTs

Town Groupings are Available on our Website

ctdata.org/six-connecticuts/

For questions, contact jason@ctdata.org



Questions & Discussion

Thank you for attending:

From Five CTs to Six:
A New Framework for Understanding Connecticut's Towns

Please Fill out our Session Survey

