

# The Rise in Super Commuters

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# Post pandemic there has been a Surge in long-distance commuting

1. Examining car GPS data we see a rise in the share of commute journeys over 40 miles across the largest 10 US cities
2. Rise is greatest for “super-commuters”, which we define as commutes over 75 miles. The share of these super-commutes have grown by 32% post-pandemic
3. One likely explanation is the rise in working from home.
  1. WFH directly reduces the need to commute in every day
  2. WFH indirectly reduces traffic volume, speeding up super-commutes
4. These super-commutes typically take 2 hours and 20 minutes – so a daily both ways super commute would take almost 5 hours

**Methodology**

**Results – all cities**

**Results – individual cities**

# Methodology

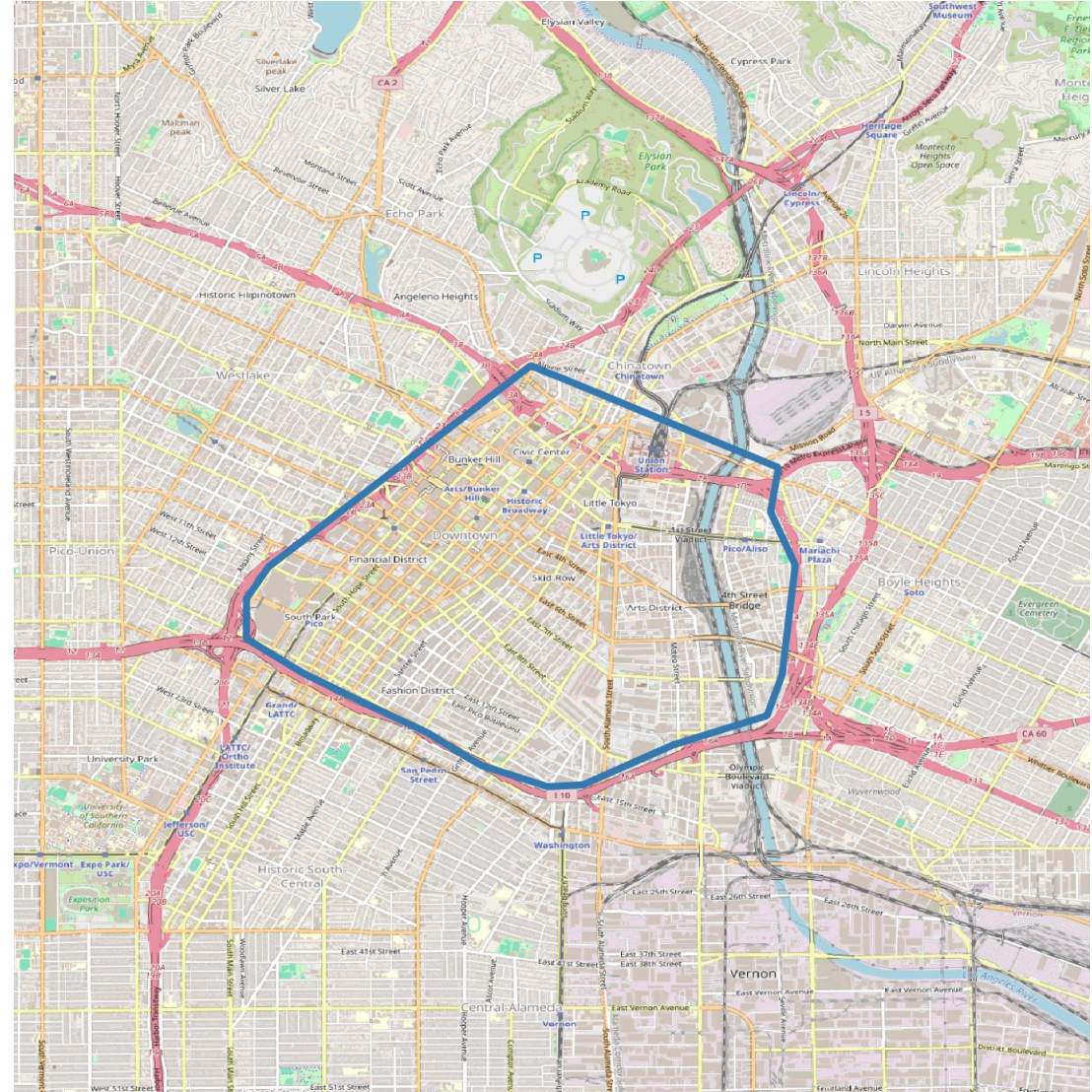
- Analyze car commuting trips ending in the 10 largest US urban areas using INRIX GPS trip datasets
- Compared last 4-months pre-pandemic (November 2019 – February 2020) to same 4-months post-pandemic (November 2023 - February 2024)
- Commute trips must occur on weekdays and end between 7AM – 10AM.
- Commute trips start outside the downtown area and end in the downtown area.
- Trip sample size is about 200k trips per city.
- Plot the shares by period of all trips (to control for total trip volume) and examine trips above 20 miles (to ignore shorter journeys like school driving)

# Example with LA

The downtown is the polygon on the right.

Trips to be defined as “commute trips” had to end in this area between 7am and 10am on a weekday

This omits many commute trips – most commutes within LA will not end in this area. But it provides a sample of trips that have a high likelihood of being commutes, so we can examine their length over time

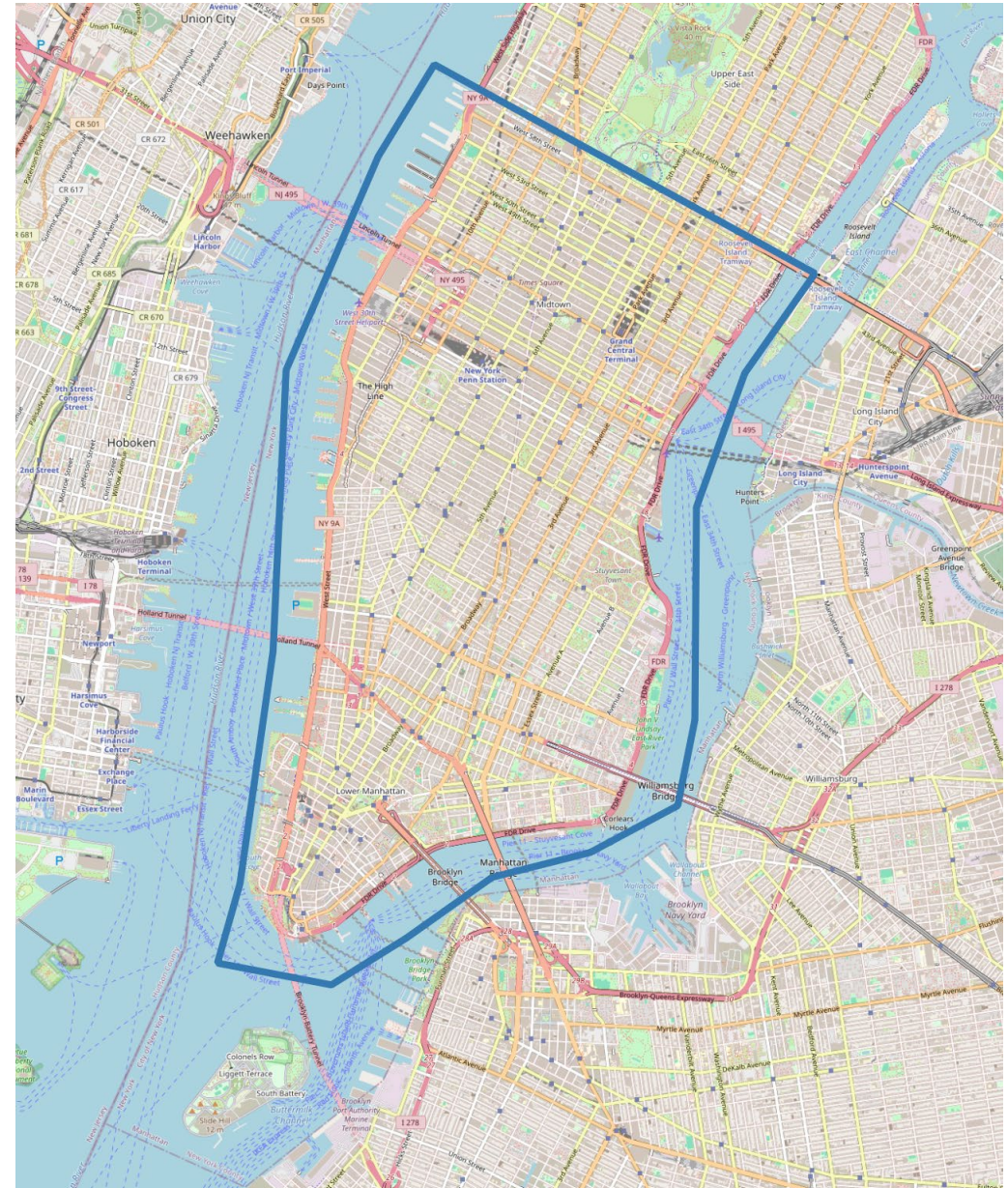


# Example with New York

The downtown is the polygon on the right.

Trips to be defined as “commute trips” had to end in this area between 7am and 10am on a weekday

This omits many commute trips – most commutes within New York will not end in this area. But it provides a sample of trips that have a high likelihood of being commutes, so we can examine their length over time



# Top 10 US urban areas we study

The 387 metropolitan statistical areas of the United States<sup>[15]</sup>

	Metropolitan statistical area	2023 estimate	2020 census	% change	Encompassing combined statistical area
1	New York–Newark–Jersey City, NY-NJ MSA	19,498,249	20,081,935	-2.91%	New York–Newark, NY-NJ-CT-PA CSA
2	Los Angeles–Long Beach–Anaheim, CA MSA	12,799,100	13,200,998	-3.04%	Los Angeles–Long Beach, CA CSA
3	Chicago–Naperville–Elgin, IL-IN MSA	9,262,825	9,449,351	-1.97%	Chicago–Naperville, IL-IN-WI CSA
4	Dallas–Fort Worth–Arlington, TX MSA	8,100,037	7,637,387	+6.06%	Dallas–Fort Worth, TX-OK CSA
5	Houston–Pasadena–The Woodlands, TX MSA	7,510,253	7,149,642	+5.04%	Houston–Pasadena, TX CSA
6	Atlanta–Sandy Springs–Roswell, GA MSA	6,307,261	6,104,803	+3.32%	Atlanta–Athens-Clarke County–Sandy Springs, GA-AL CSA
7	Washington–Arlington–Alexandria, DC-VA-MD-WV MSA	6,304,975	6,278,542	+0.42%	Washington–Baltimore–Arlington, DC-MD-VA-WV-PA CSA
8	Philadelphia–Camden–Wilmington, PA-NJ-DE-MD MSA	6,246,160	6,245,051	+0.02%	Philadelphia–Reading–Camden, PA-NJ-DE-MD CSA
9	Miami–Fort Lauderdale–West Palm Beach, FL MSA	6,183,199	6,138,333	+0.73%	Miami–Port St. Lucie–Fort Lauderdale, FL CSA
10	Phoenix–Mesa–Chandler, AZ MSA	5,070,110	4,845,832	+4.63%	Phoenix–Mesa, AZ CSA

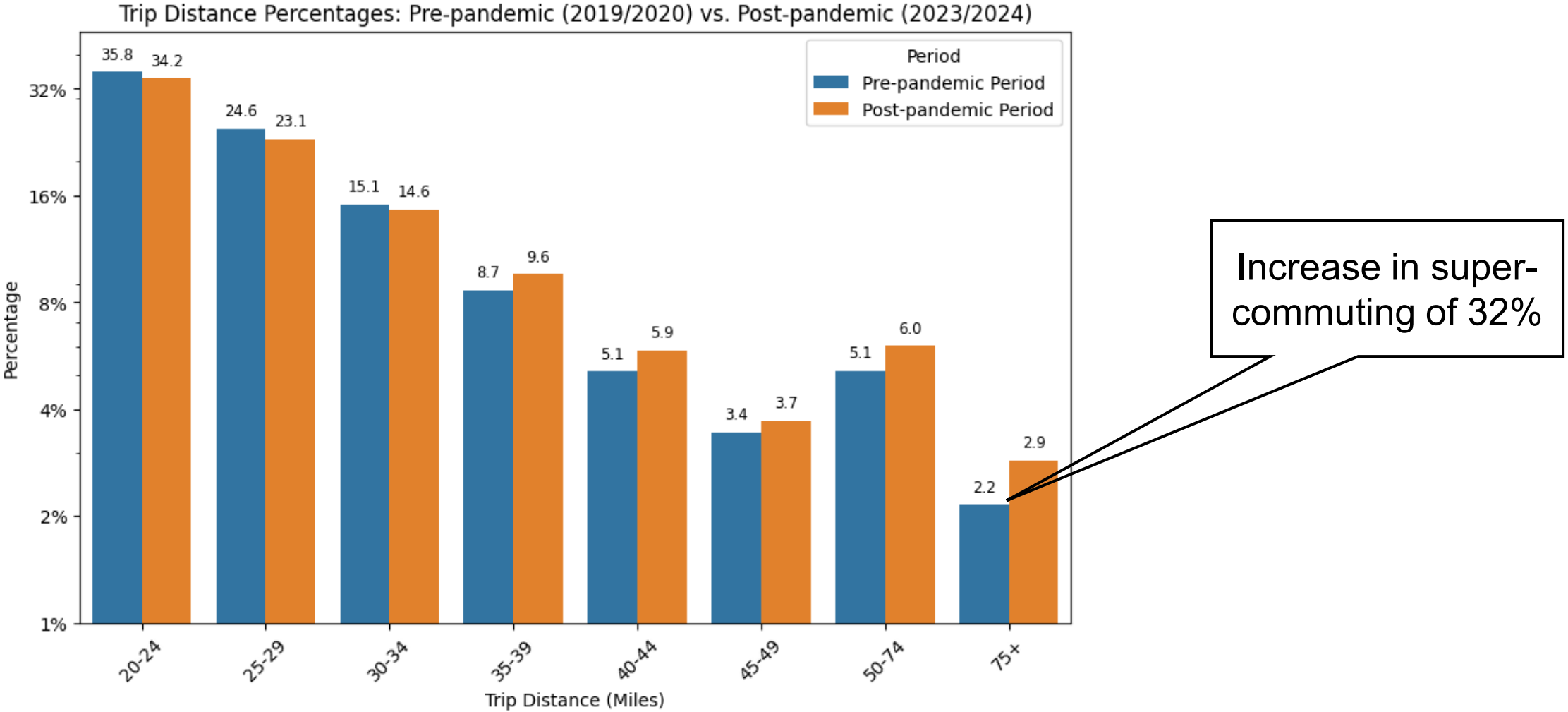
Source: [https://en.wikipedia.org/wiki/Metropolitan\\_statistical\\_area](https://en.wikipedia.org/wiki/Metropolitan_statistical_area)

# **Methodology**

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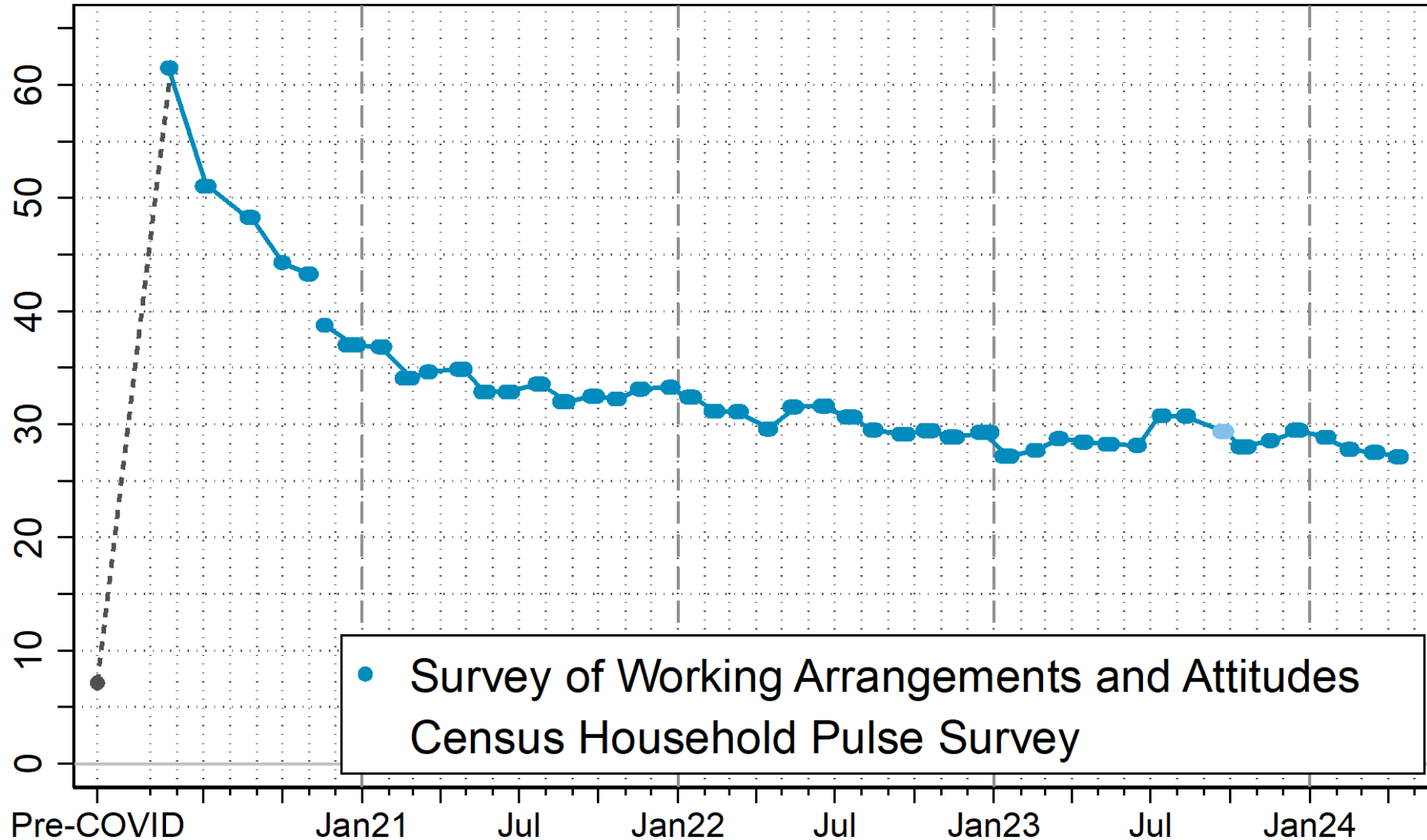
# Across the largest 10 US cities we see increasing long distance commutes, with those about 75 miles – “super commutes” – up 32%



Note: Based on INRIX GPS data from November 2019-February 2020 and November 2023-February 2024, covering approximately 2,000,000 journeys across both periods

# Working from home increased about 5x from pre to post pandemic

## Percentage of paid full days worked from home



Source: Responses to the questions:

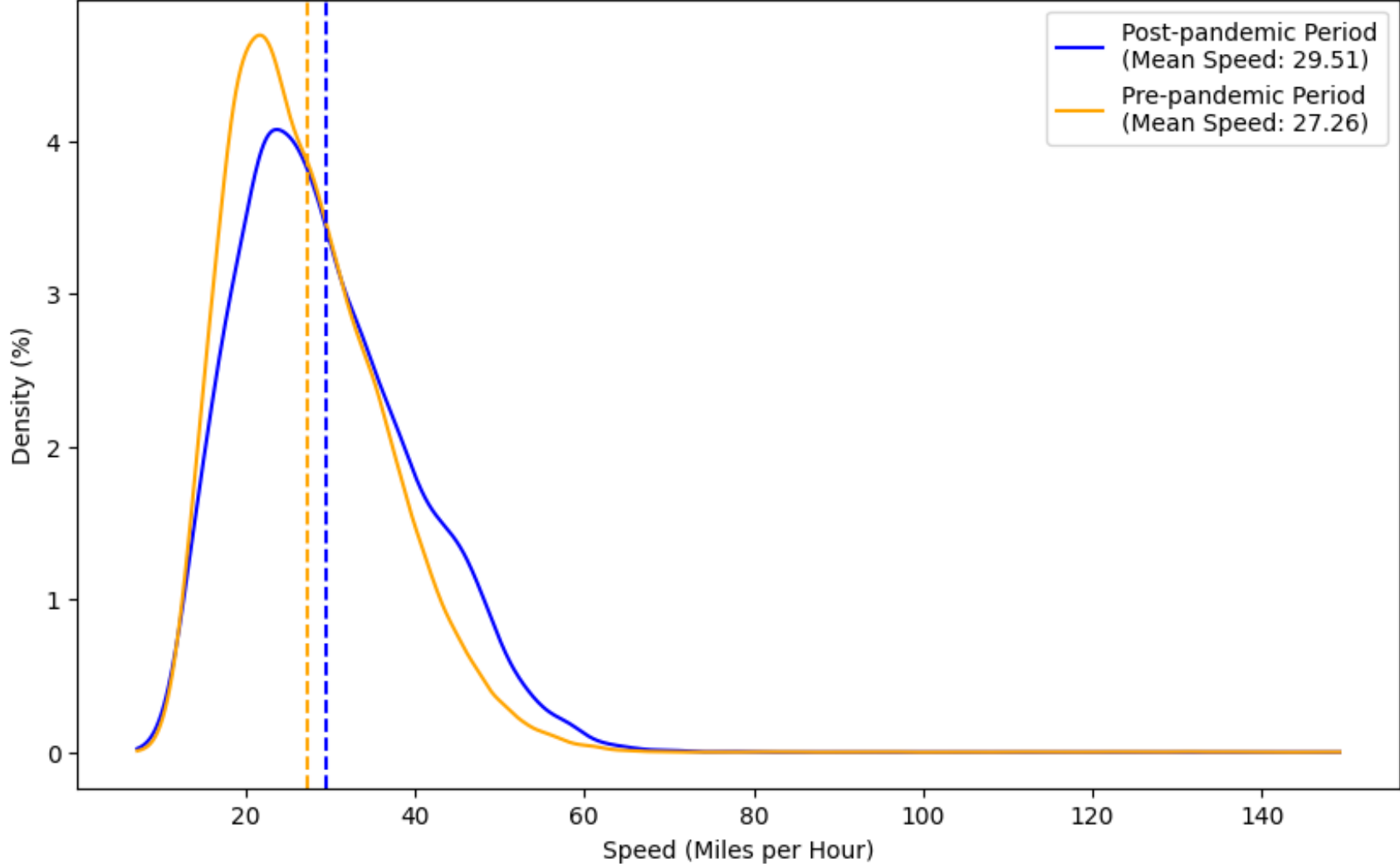
- **Currently (this week) what is your work status?** (SWAA)
- **For each day last week, did you work a full day (6 or more hours), and if so where?** (SWAA)
- **In the last 7 days, have you...teleworked or worked from home?** (HHP)

**Notes:** For each wave, we compute the percent of paid full days worked from home in the SWAA and Household Pulse Survey (HHP) and plot it on the vertical axis. The horizontal-axis location shows when the survey was in the field. The pre-COVID figure is from the 2017-2018 American Time Use Survey. **SWAA:** Before November 2020, we asked the first question above. Since November 2021, we have asked the second question. From November 2020 to October 2021, we back-cast responses to the current question using a regression model based on current-question responses and another question (not shown). We re-weight the sample of US residents aged 20 to 64 earning \$10,000 or more in a prior year to match CPS shares by age-sex-education-earnings cells. **HHP:** We focus on individuals aged 20 to 64 with household incomes above \$25,000 per year. We assign 30% of days WFH if the respondent did so for "for 1-2 days;" 70% if they did so "for 3-4 days;" 100% if "5 or more days;" and 0 for "No."

**N = 147,412 (SWAA) N = 625,415 (HHP)**

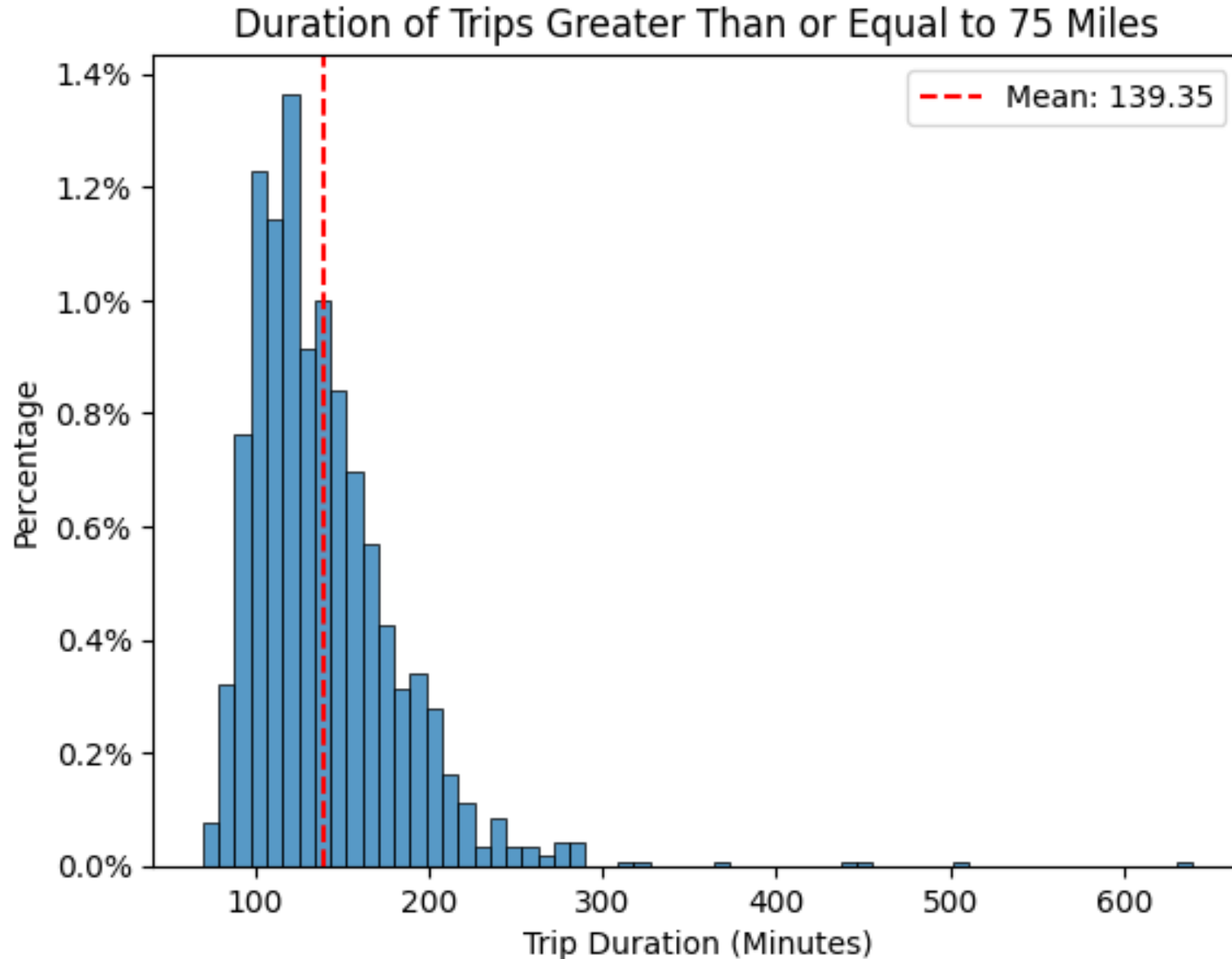
**WFH increases long-distance commuting for two reasons:  
(1) employees need to commute less often so can live further away,  
(2) WFH reduces traffic volume, increasing average traffic speed**

Speed of Trips Greater Than or Equal to 20 Miles



Note: Based on INRIX GPS data from November 2019-February 2020 and November 2023-February 2024, covering approximately 2,000,000 journeys across both periods

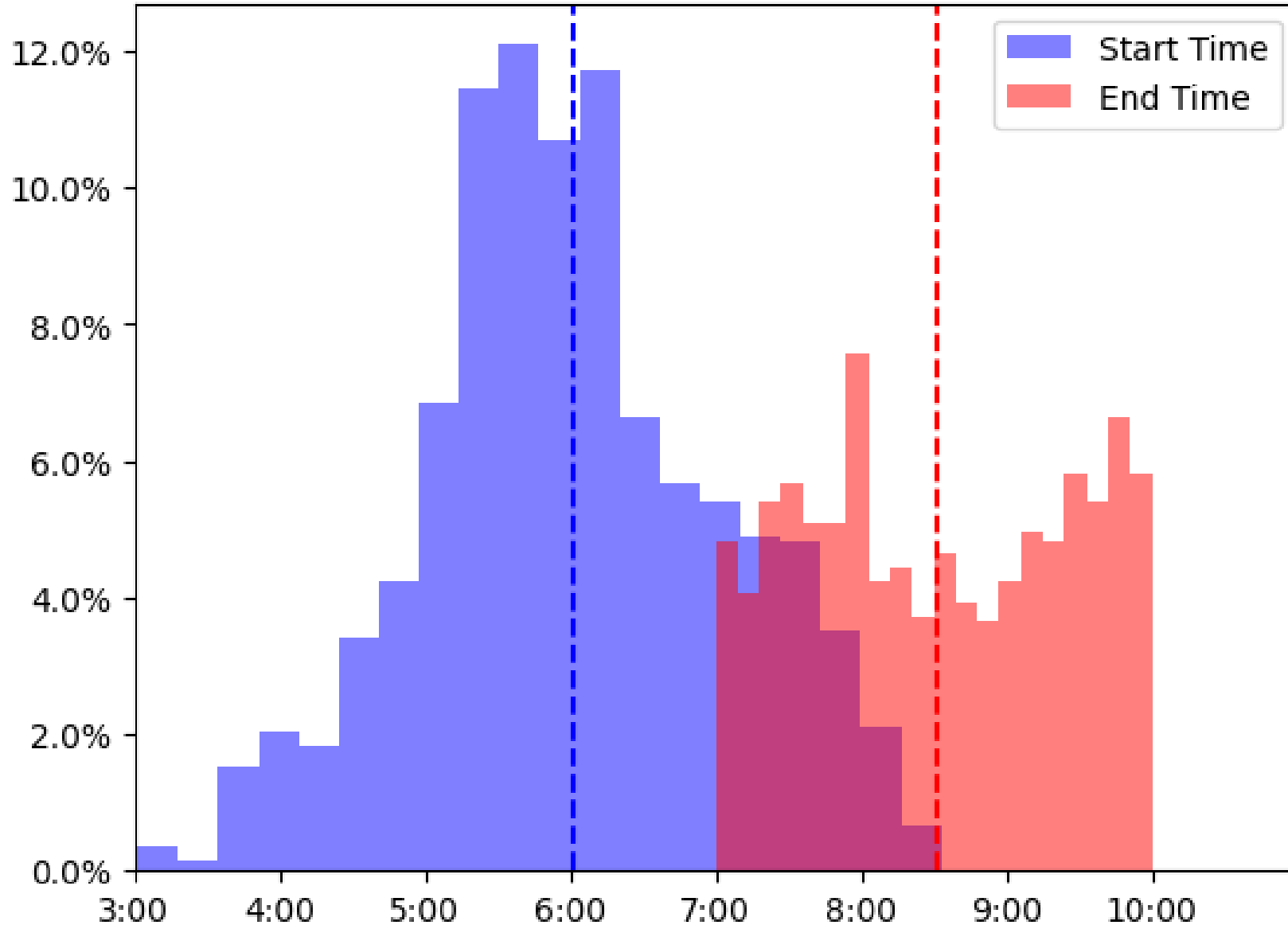
# Examining “super-commutes” these take on average 2 hours and 19 minutes each way



Note: Based on INRIX GPS data from November 2019-February 2020 and November 2023-February 2024, covering approximately 2,000,000 journeys across both periods

# Our super-commute sample start from 3:00am onwards

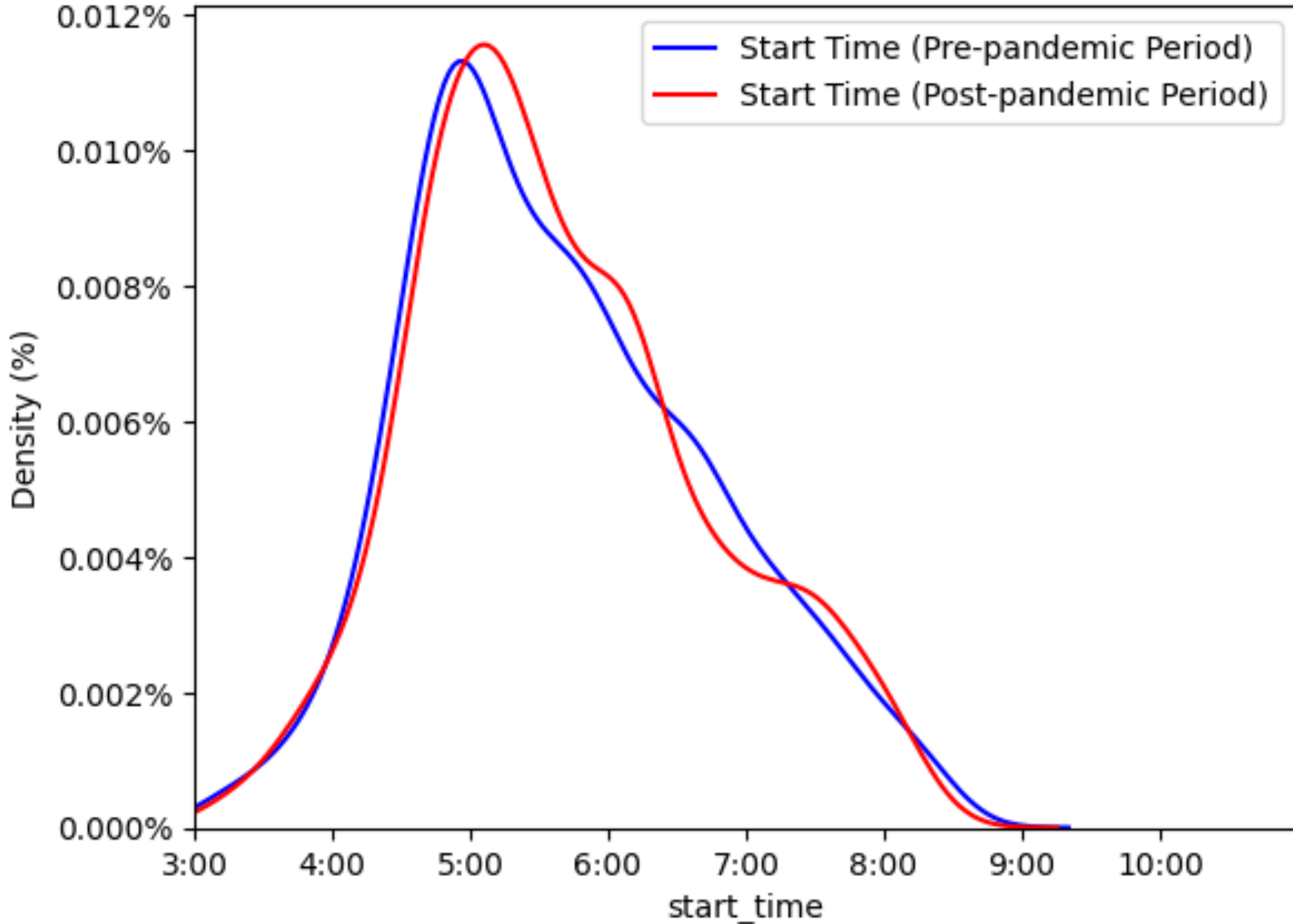
Start and End Times for Post-pandemic Period 75+ Mile Trips



Note: Based on INRIX GPS data from November 2019-February 2020 and November 2023-February 2024, covering approximately 300,000 journeys across both periods. Note that our commutes are defined as ending between 7am and 10am.

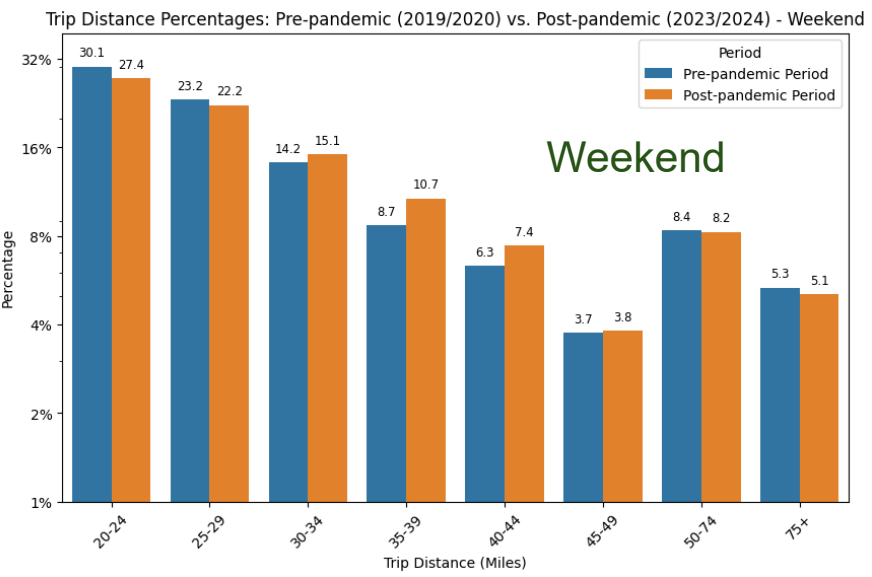
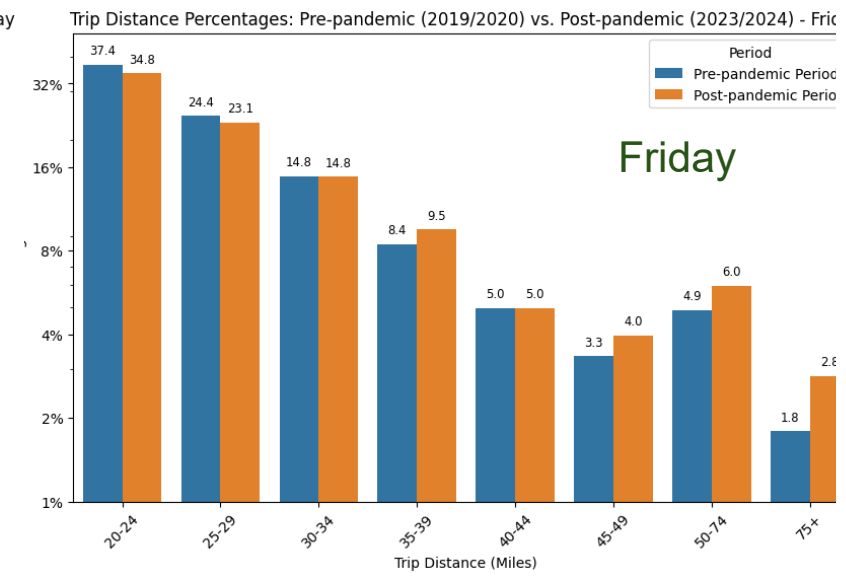
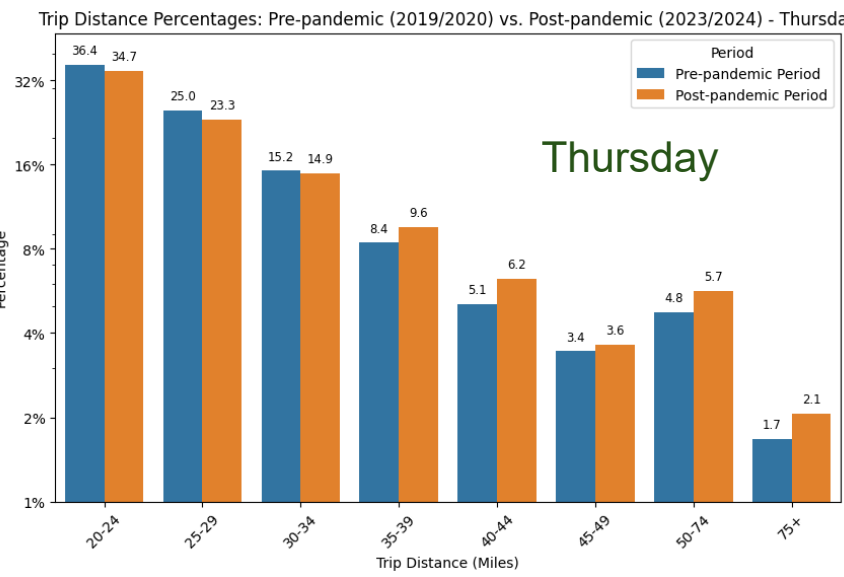
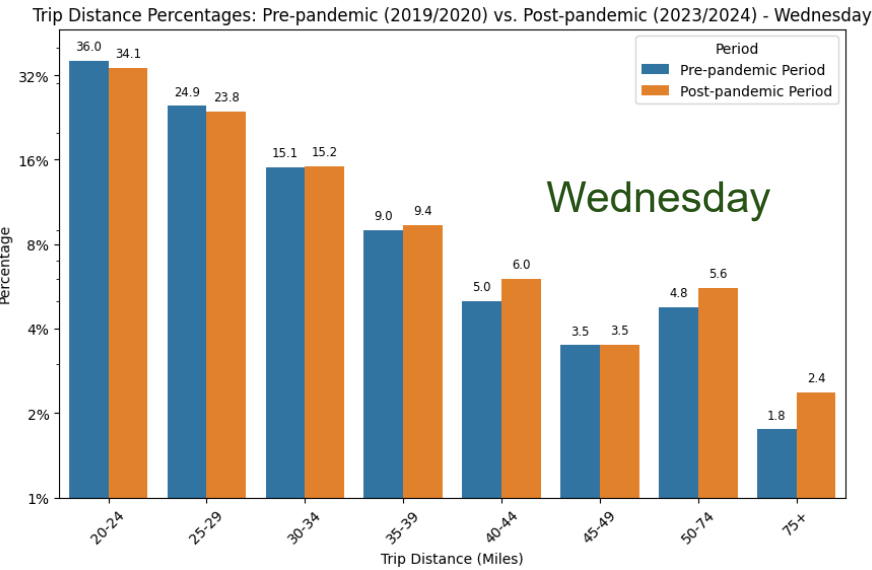
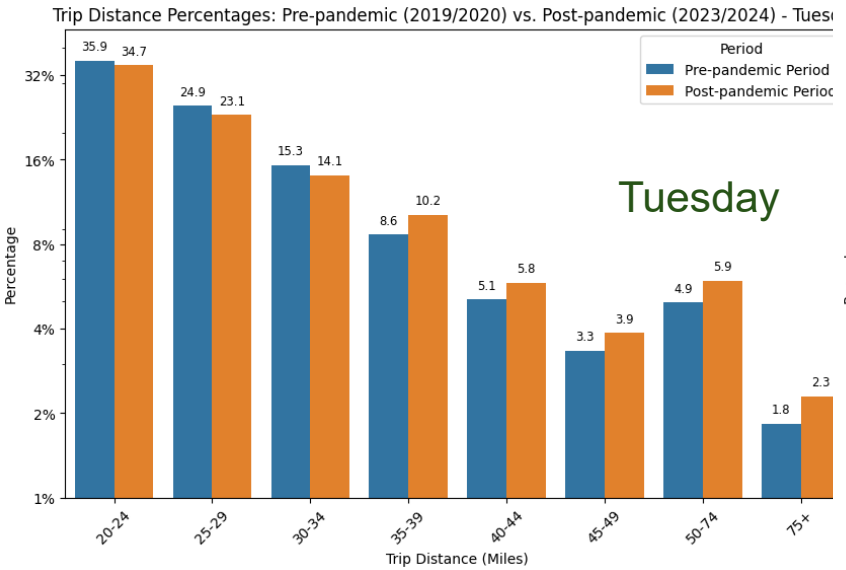
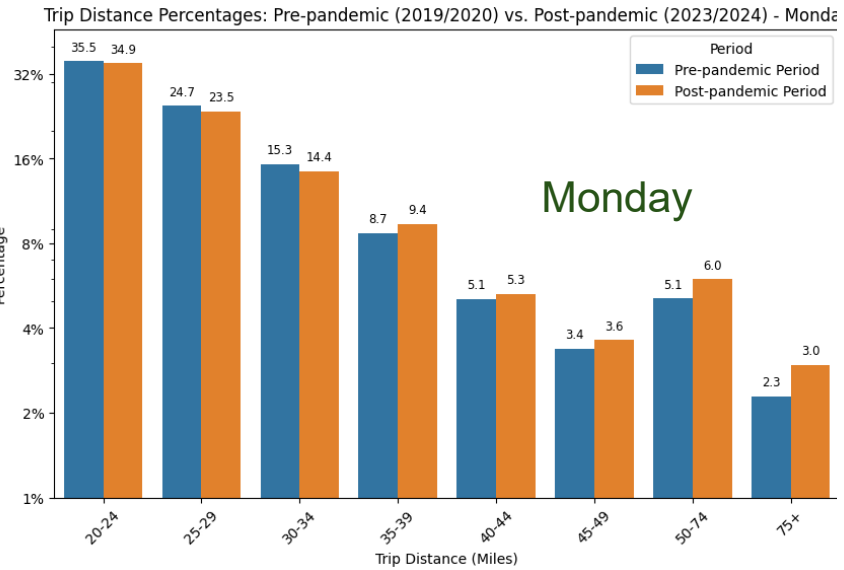
# Super-commutes start 8 minutes later post-pandemic on average

Density Plots of Start Times Pre and Post Pandemic



Note: Based on INRIX GPS data from November 2019-February 2020 and November 2023-February 2024, covering approximately 300,000 journeys across both periods. New York City data

# As a data quality check we examine commuting on weekdays (it increases above 35 miles every day) and the weekend (it is flat about 45 miles)



Note: Based on INRIX GPS data from November 2019-February 2020 and November 2023-February 2024, covering approximately 2,000,000 journeys across both periods

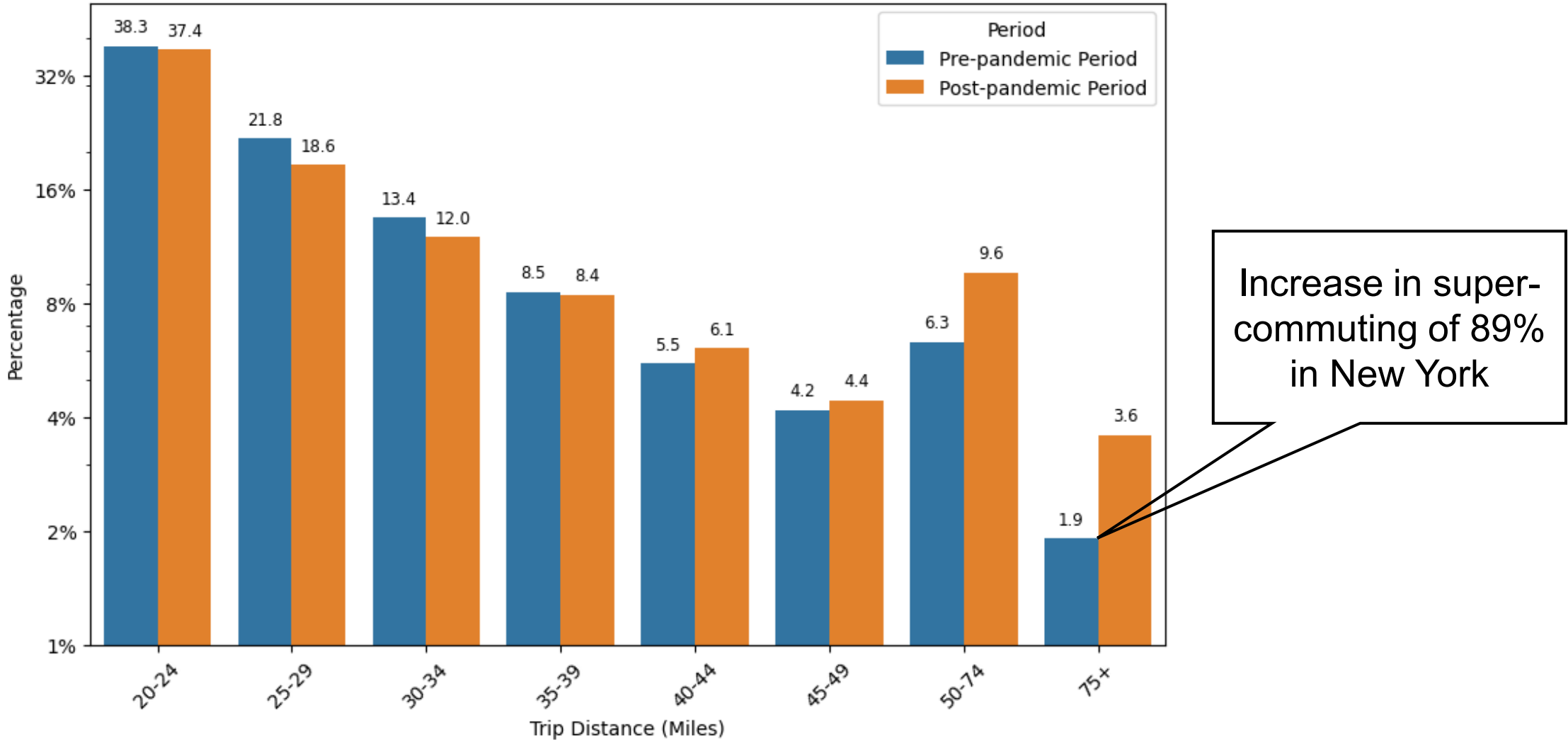
**Methodology**

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# New York City shows a surge in trips of 40+ miles post pandemic

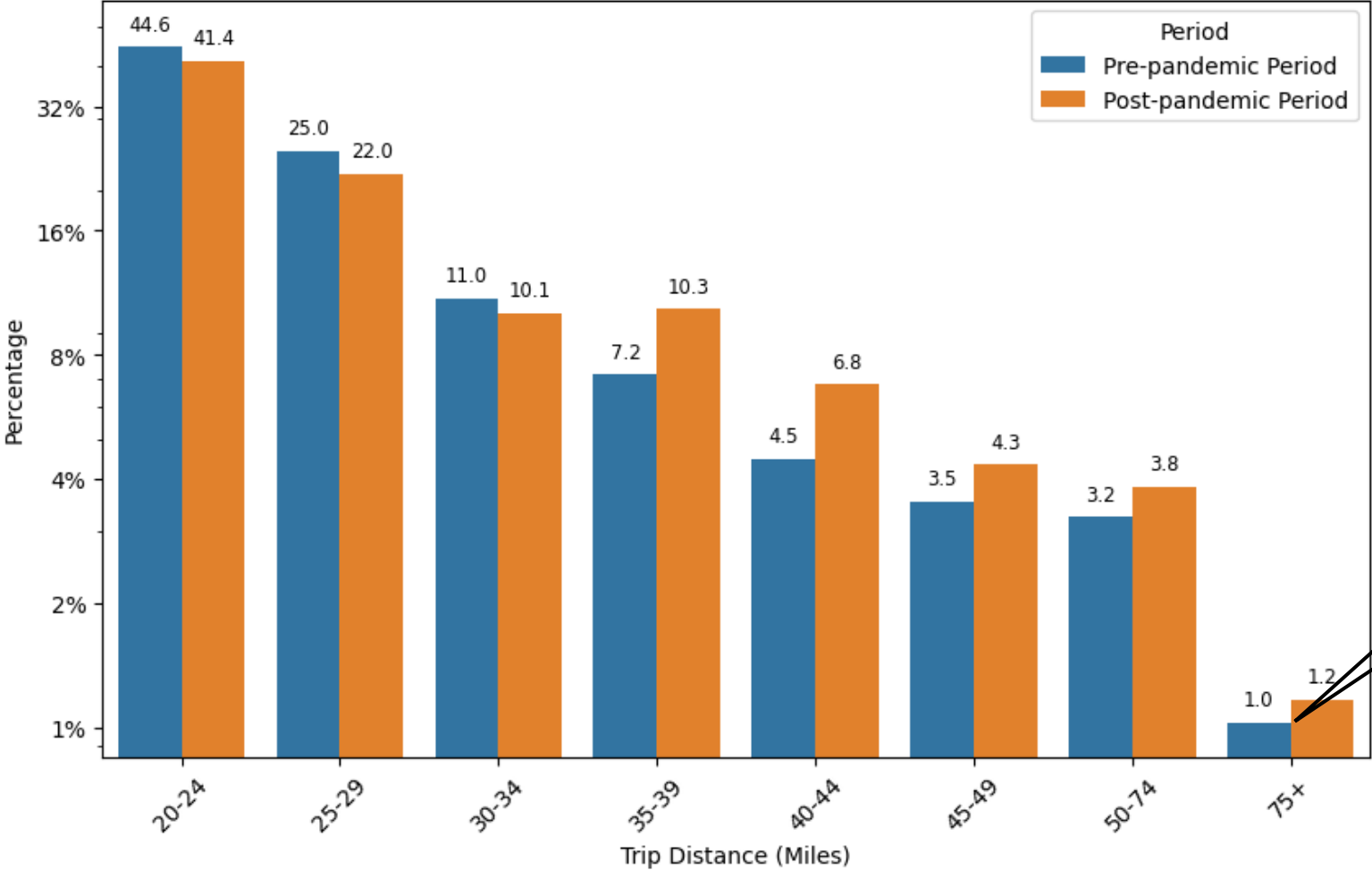
Trip Distance Percentages: Pre-pandemic (2019/2020) vs. Post-pandemic (2023/2024) (NYC, NY)



Note: Based on INRIX GPS data from November 2019-February 2020 and November 2023-February 2024, covering approximately 300,000 journeys across both periods

# LA sees an increase in trips of 35+ miles post pandemic

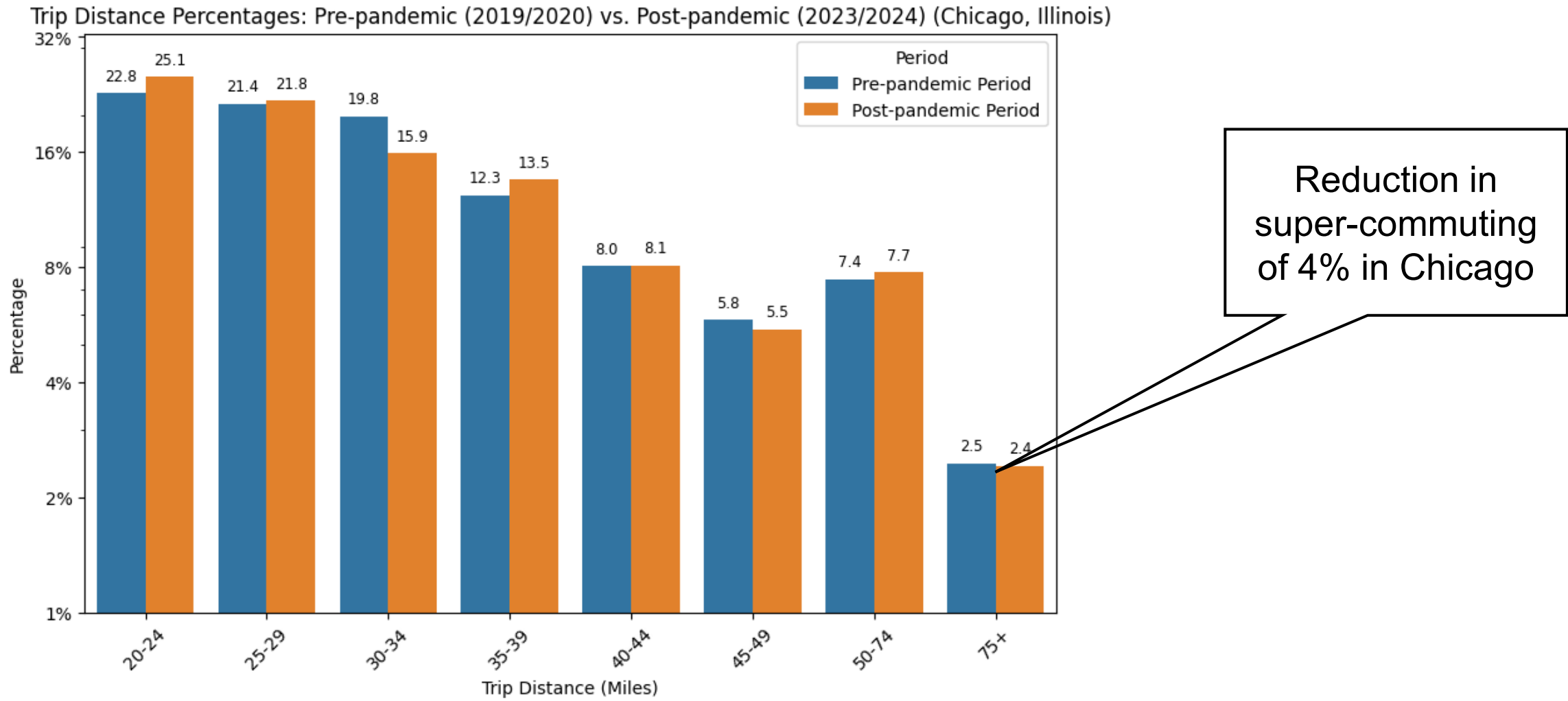
Trip Distance Percentages: Pre-pandemic (2019/2020) vs. Post-pandemic (2023/2024) (Los Angeles, CA)



Increase in super-commuting of 20% in Los Angeles

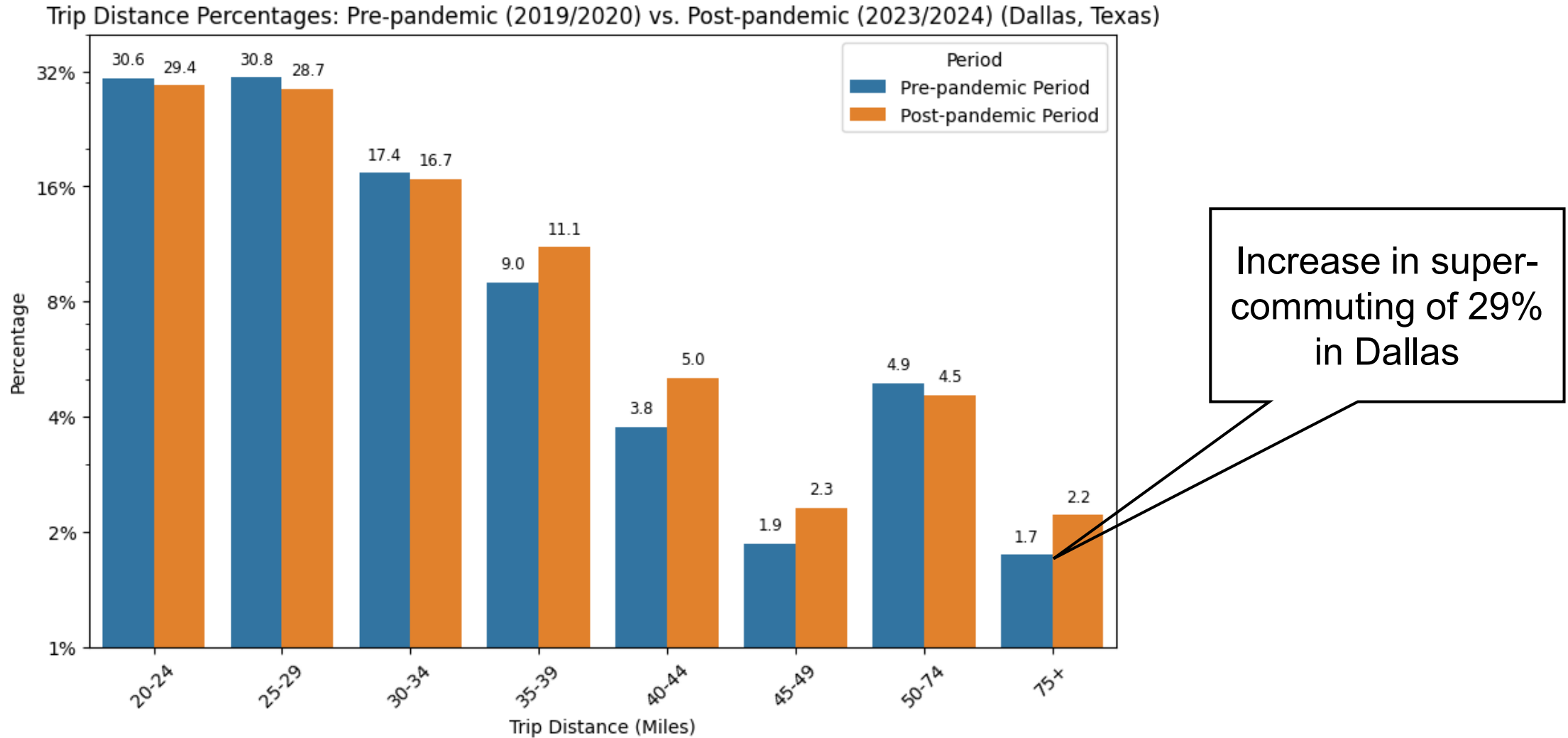
Note: Based on INRIX GPS data from November 2019-February 2020 and November 2023-February 2024, covering approximately 210,000 journeys across both periods

# Chicago sees an increase in trips of 40+ miles post pandemic



Note: Based on INRIX GPS data from November 2019-February 2020 and November 2023-February 2024, covering approximately 180,000 journeys across both periods

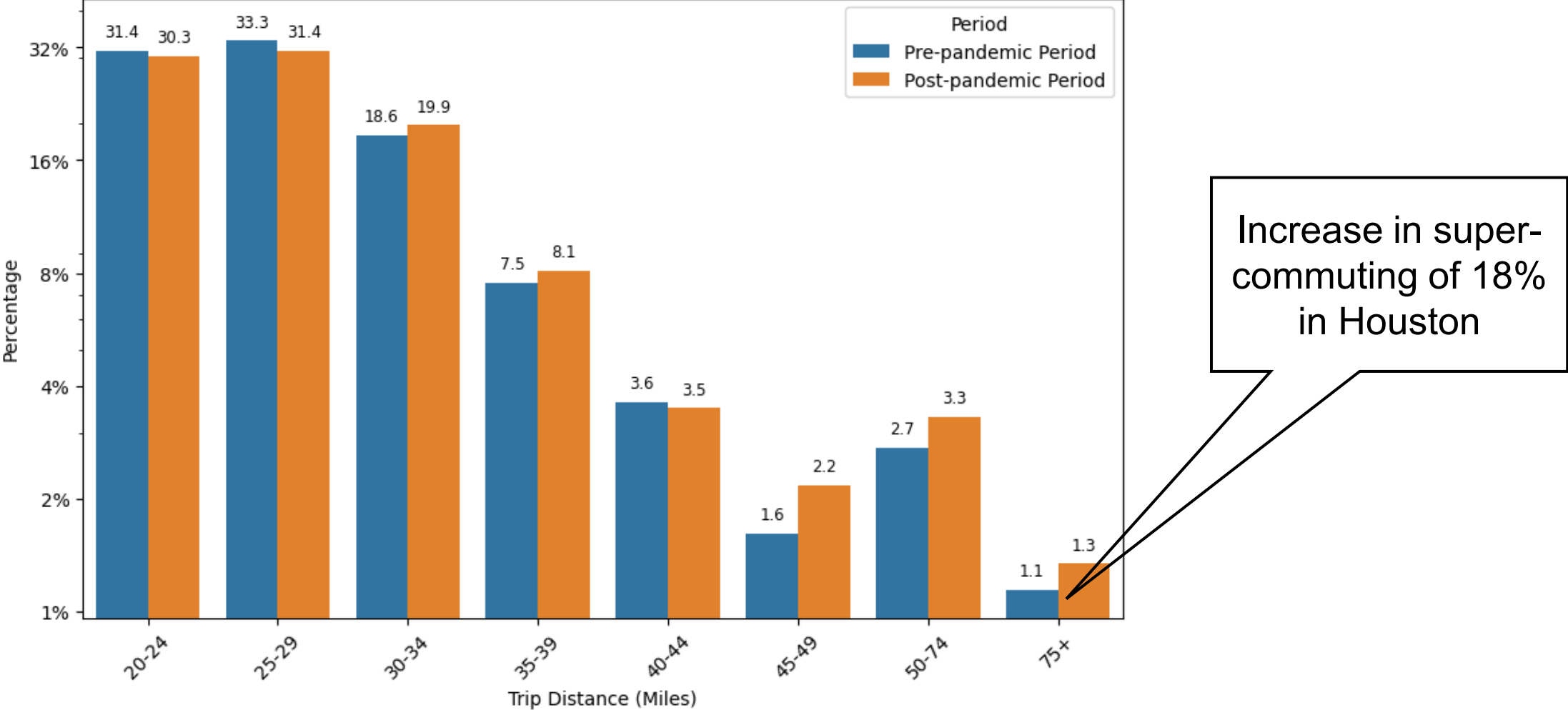
# Dallas sees an increase in trips above 35 miles post pandemic



Note: Based on INRIX GPS data from November 2019-February 2020 and November 2023-February 2024, covering approximately 190,000 journeys across both periods

# Houston sees a surge in trips of 35+ miles post pandemic

Trip Distance Percentages: Pre-pandemic (2019/2020) vs. Post-pandemic (2023/2024) (Houston, Texas)

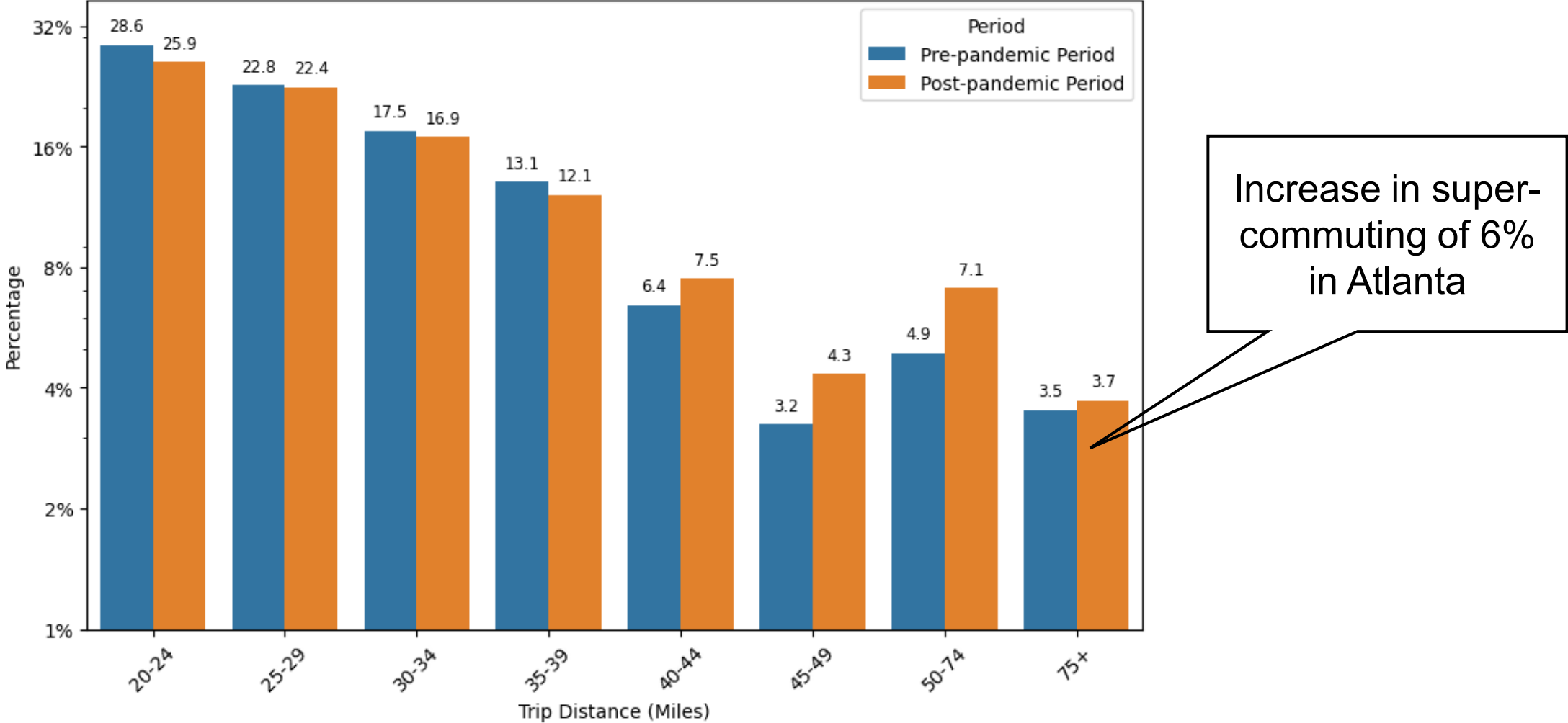


Increase in super-commuting of 18% in Houston

Note: Based on INRIX GPS data from November 2019-February 2020 and November 2023-February 2024, covering approximately 250,000 journeys across both periods

# Atlanta sees a surge in trips of 40+ miles post pandemic

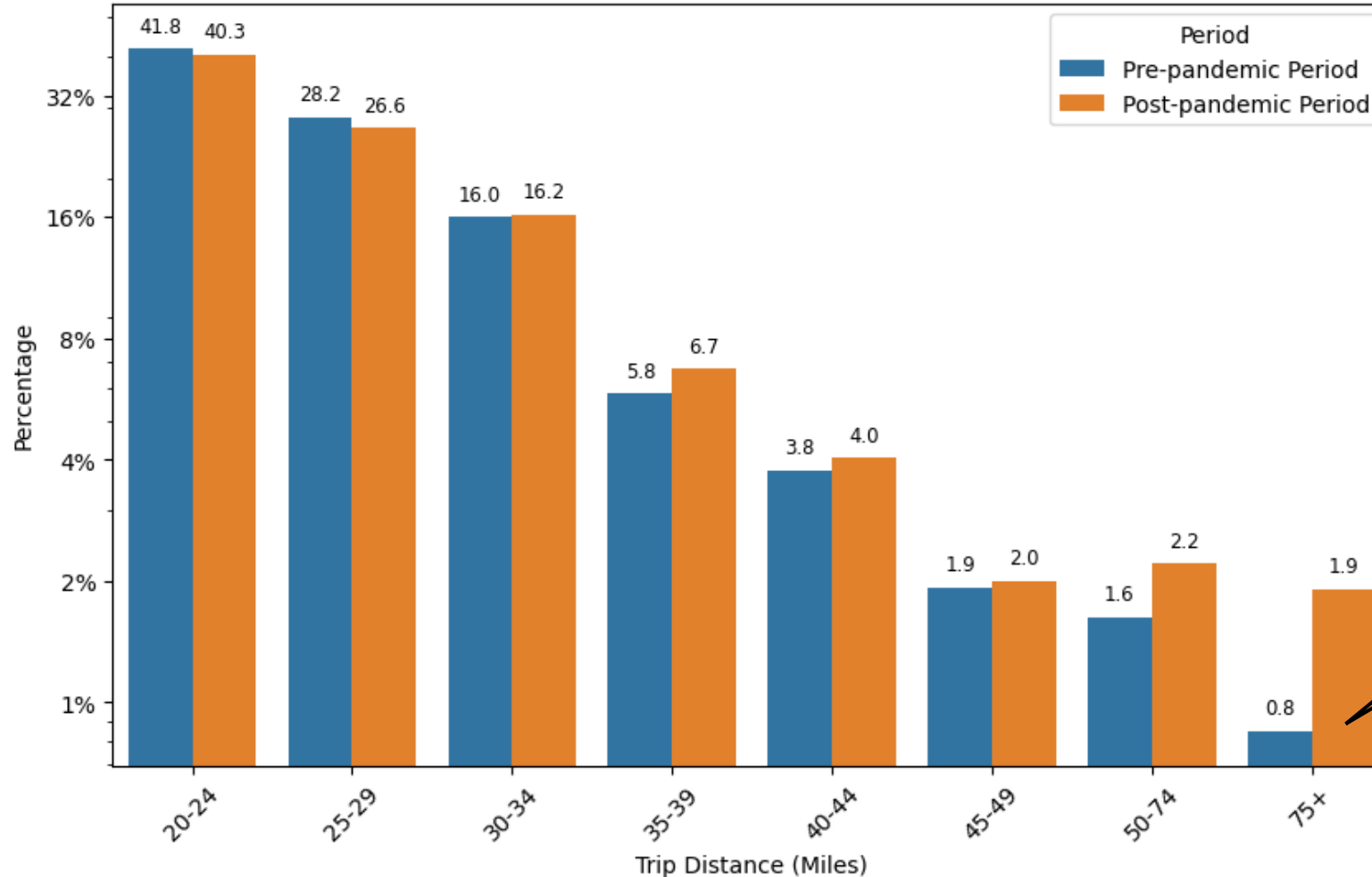
Trip Distance Percentages: Pre-pandemic (2019/2020) vs. Post-pandemic (2023/2024) (Atlanta, Georgia)



Note: Based on INRIX GPS data from November 2019-February 2020 and November 2023-February 2024, covering approximately 190,000 journeys across both periods

# Washington DC sees an increase in trips above 35 miles post pandemic

Trip Distance Percentages: Pre-pandemic (2019/2020) vs. Post-pandemic (2023/2024) (Washington DC)

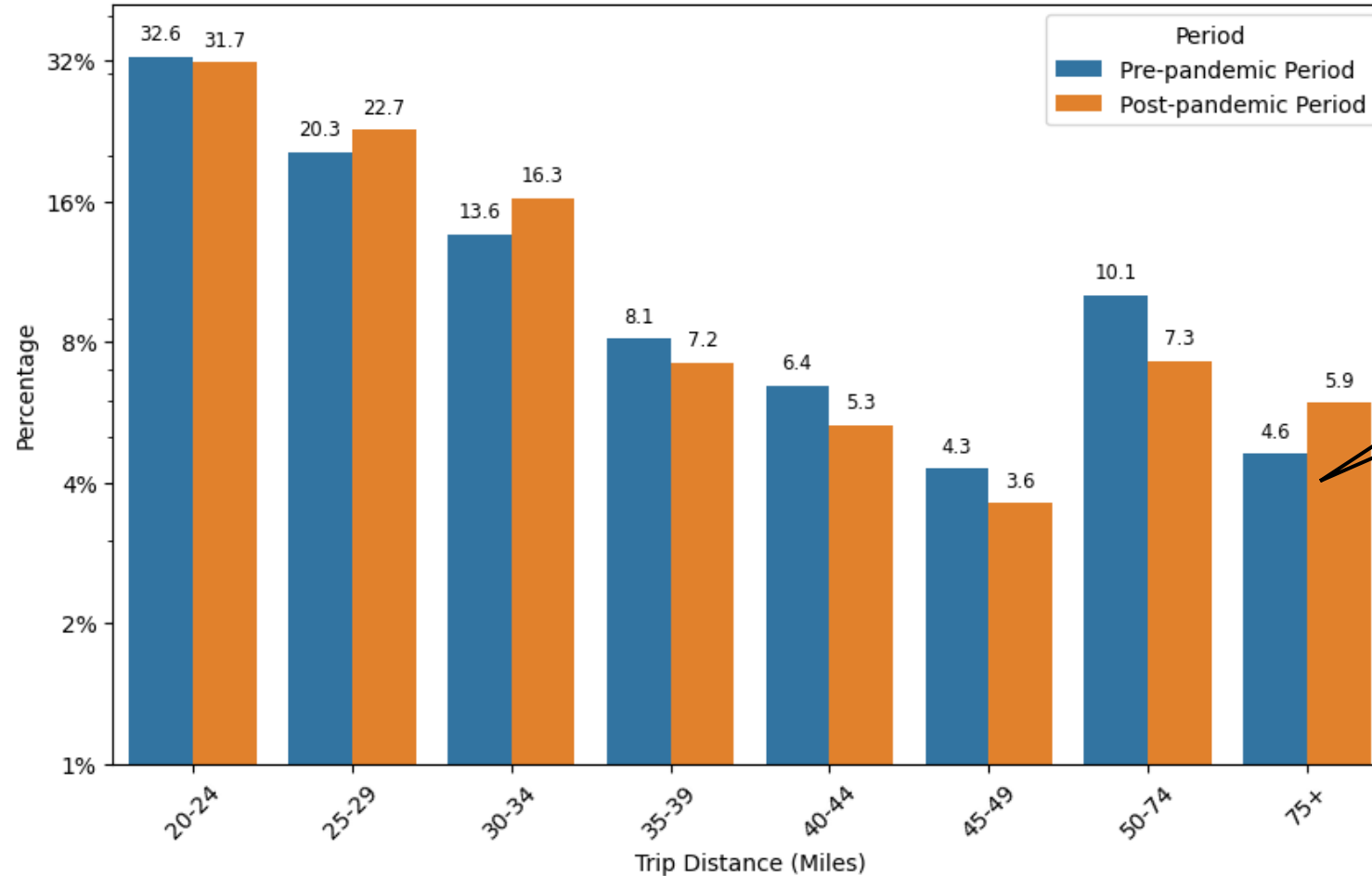


Increase in super-commuting of 100% in Washington DC

Note: Based on INRIX GPS data from November 2019-February 2020 and November 2023-February 2024, covering approximately 130,000 journeys across both periods

# Philadelphia sees an increase in very long commutes above 75miles post pandemic

Trip Distance Percentages: Pre-pandemic (2019/2020) vs. Post-pandemic (2023/2024) (Philadelphia, Pennsylvania)

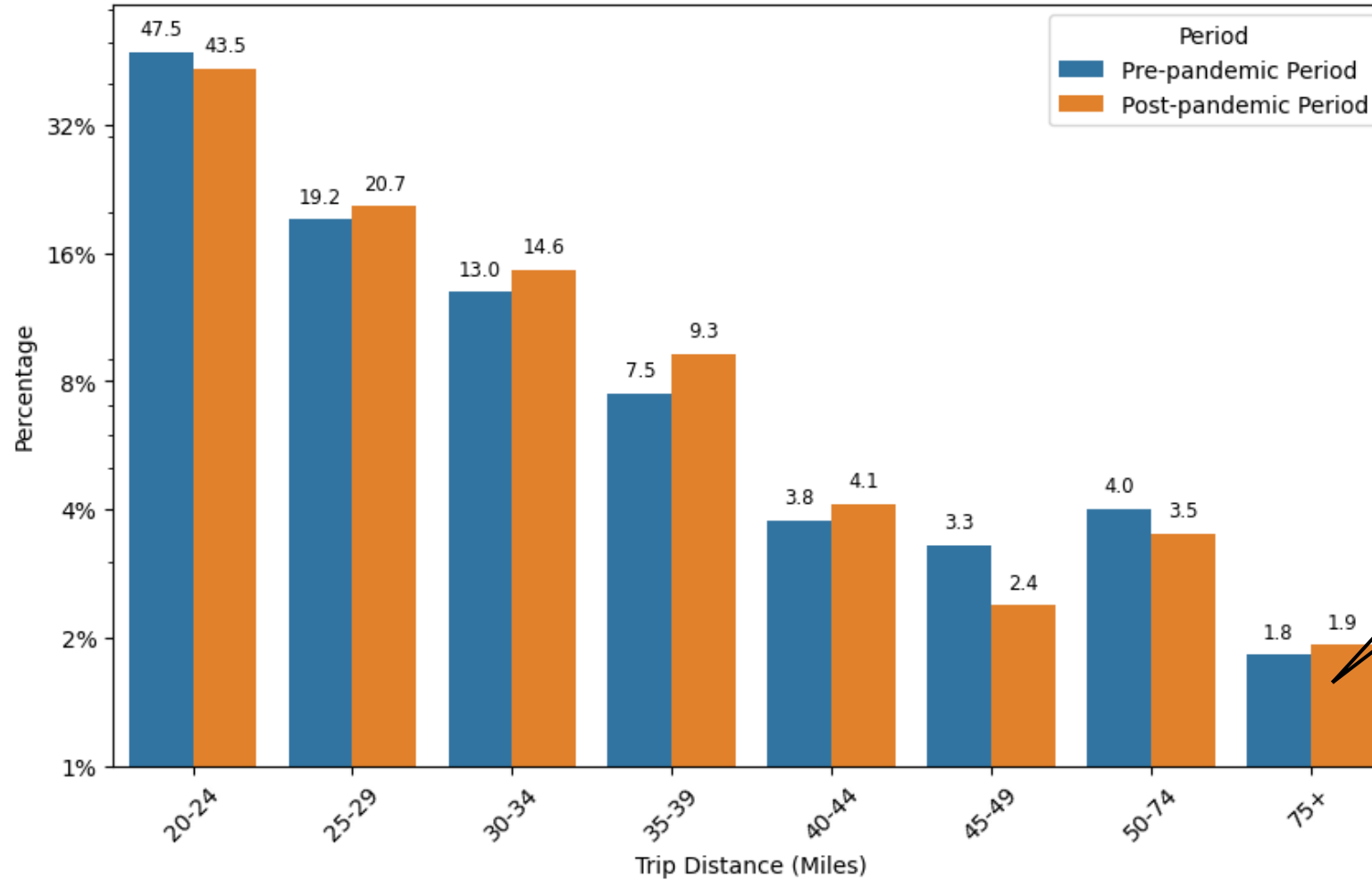


Increase in super-commuting of 28% in Philadelphia

Note: Based on INRIX GPS data from November 2019-February 2020 and November 2023-February 2024, covering approximately 150,000 journeys across both periods

# Miami sees an increase in very long commutes above 75miles post pandemic

Trip Distance Percentages: Pre-pandemic (2019/2020) vs. Post-pandemic (2023/2024) (Miami, Florida)

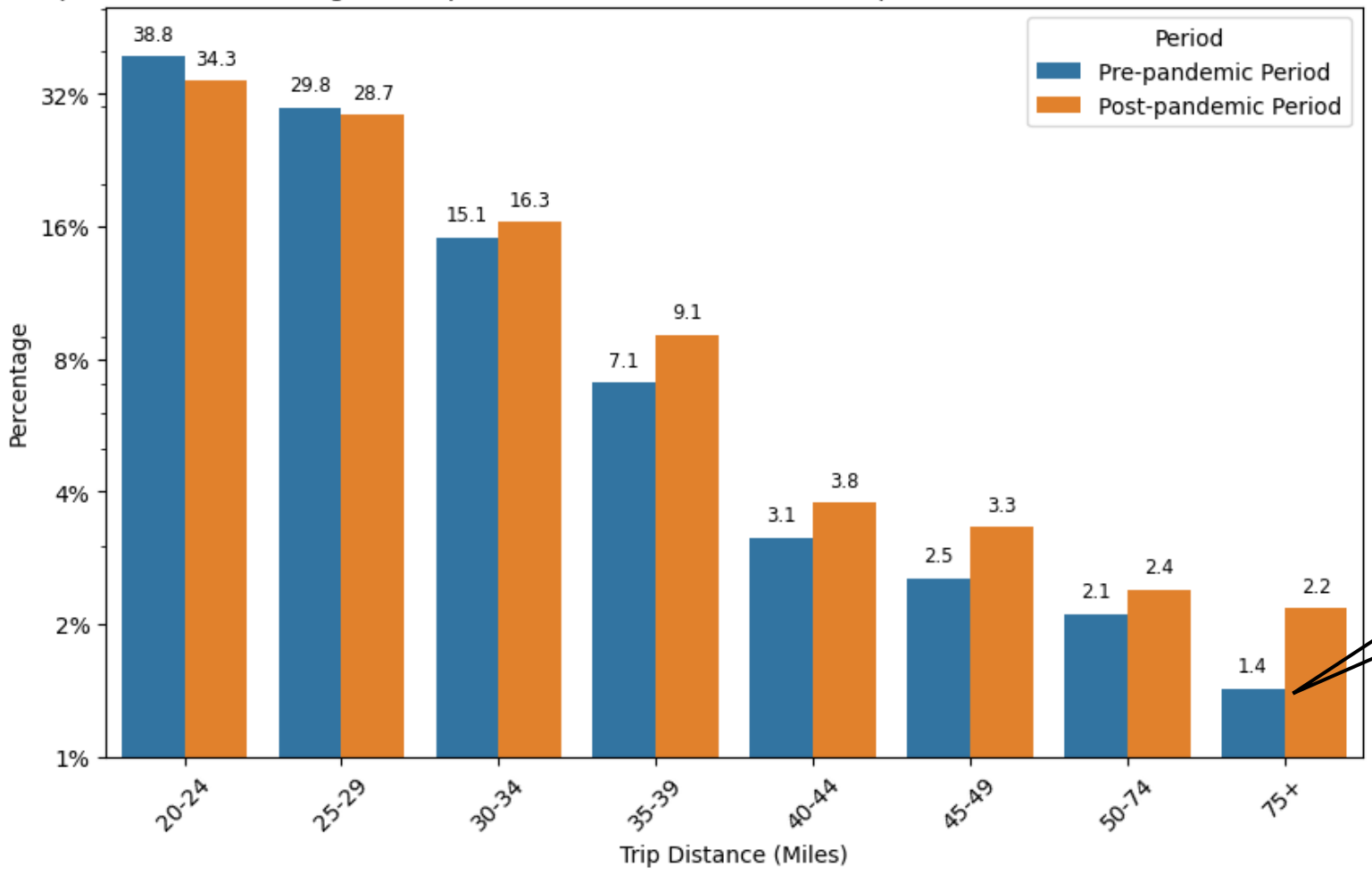


Increase in super-commuting of 6% in Miami

Note: Based on INRIX GPS data from November 2019-February 2020 and November 2023-February 2024, covering approximately 180,000 journeys across both periods

# Phoenix sees an increase in commutes above 35miles post pandemic

Trip Distance Percentages: Pre-pandemic (2019/2020) vs. Post-pandemic (2023/2024) (Phoenix, Arizona)



Increase in super-commuting of 57% in Phoenix

Note: Based on INRIX GPS data from November 2019-February 2020 and November 2023-February 2024, covering approximately 150,000 journeys across both periods

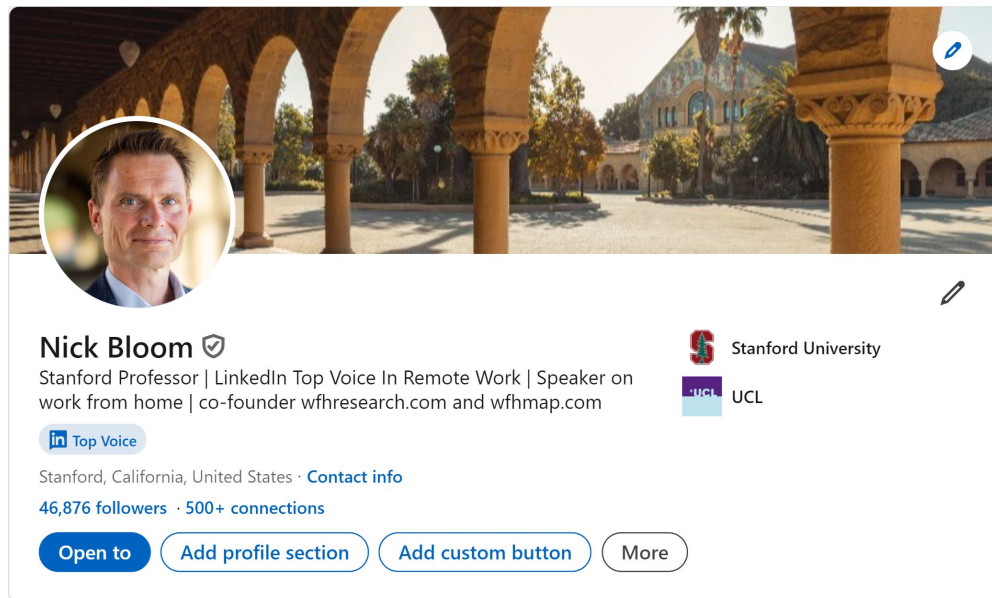
# Summary Conclusions

1. Post-pandemic there has been a rise in the share of commute journeys over 40 miles across the largest 10 US cities
2. This rise is greatest for super-commuters, commutes over 75 miles, which have grown by 32% post-pandemic
3. One likely explanation is the rise in working from home.
  1. WFH directly reduces the need to commute in every day
  2. WFH indirectly reduces traffic volume, speeding up super-commutes
4. These super-commutes typically take 2 hours and 20 minutes each way

# Next Steps

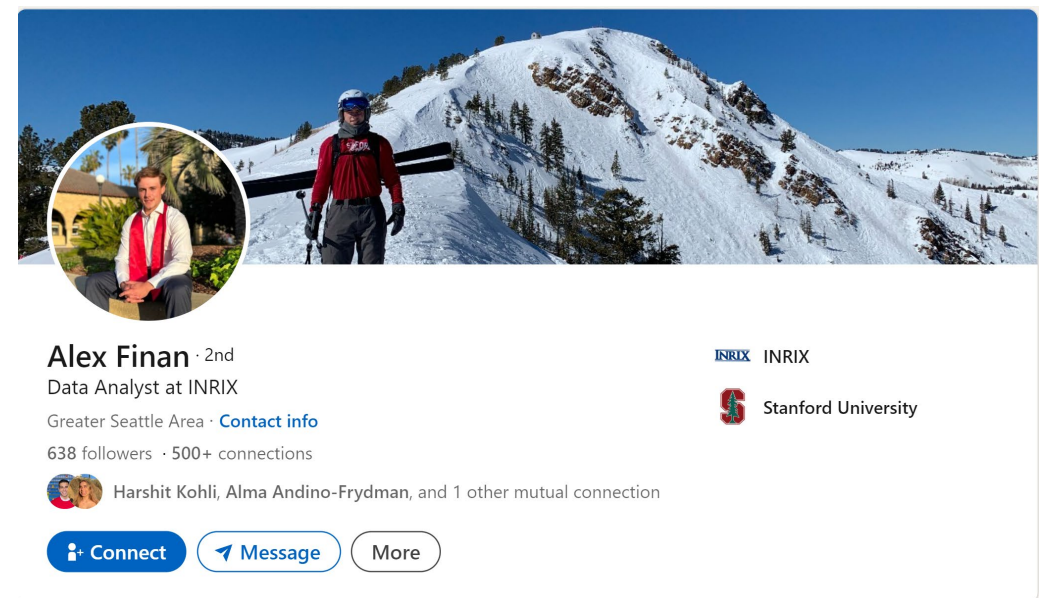
- Examine smaller cities in the range of 11-30 to investigate broader changes
- Identify the times and origin regions of super-commuters
- Examine the return (evening) leg of super-commuting

## Updates and other research posted on Linked-In



LinkedIn profile of Nick Bloom. The profile picture shows a man in a suit. The background image is a photograph of a large, ornate building with many arches and columns, likely a university campus. The profile information includes:

- Nick Bloom** ✓
- Stanford Professor | LinkedIn Top Voice In Remote Work | Speaker on work from home | co-founder wfhresearch.com and wfhmap.com
- Stanford University
- UCL
- Stanford, California, United States · [Contact info](#)
- 46,876 followers · 500+ connections
- Buttons: Open to, Add profile section, Add custom button, More



LinkedIn profile of Alex Finan. The profile picture shows a man in a white shirt and red tie. The background image is a photograph of a person in winter gear standing on a snowy mountain slope. The profile information includes:

- Alex Finan** · 2nd
- Data Analyst at INRIX
- Greater Seattle Area · [Contact info](#)
- 638 followers · 500+ connections
- Harshit Kohli, Alma Andino-Frydman, and 1 other mutual connection
- Buttons: Connect, Message, More