

# Rethinking Location

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\*The views expressed are mine alone and do not necessarily reflect those of the Federal Reserve Bank of Kansas City or the Federal Reserve System

# 2017: amazon HQ2

## The (2017) Criteria:

1. metropolitan area with pop  $>$  1 million
2. stable and business-friendly environment
3. location that can attract and retain talent

## The Prize:

- 50,000 jobs with avg salary  $>$  \$100,000
- \$5 billion capital investment

## The Winners

- New York City Metropolitan Area (pop 20.0 million, pop rank 1)
- Washington D.C. Metropolitan Area (pop 6.2 million, pop rank 6)
- Nashville Metropolitan Area (pop 1.9 million, pop rank 37)

# Overview

- **The fundamental determinants of metropolitan size**
- **The benefits and costs of size and how they may changed with **hybrid officing** (some days on site, some days remote)**
- **2000–17: medium-sized metros grew fastest** (pop 500 ths to 3 mil)
- **2021 (post Covid): rethinking whether to locate employer offices in city or suburbs**

# Conclusions

- **Fundamentals determining size matter!**
  - ▶ productivity; amenities; taxes
  - ▶ improving fundamentals likely to benefit existing businesses and residents
  - ▶ will also drive growth
- **Size itself matters!**
  - ▶ Severe disadvantages to small size; limited scope to escape
    - ▷ but perhaps less than before
  - ▶ Significant costs to size above some threshold
    - ▷ but probably less than before
- **Medium size balances benefits and costs**
  - ▶ but equilibrium size may have shifted upward
- **Hybrid setup probably favors locating offices near the center of metropolitan areas**

# Fundamental determinants of metropolitan size

- **Business productivity**
  - ▶ natural harbor, central location
  - ▶ natural resources (water, electricity, raw materials, weather, hazards)
  - ▶ transportation infrastructure, continuing education
  - ▶ streamlined licensing and permitting
  - ▶ test: **Are businesses willing to pay higher wages?**
- **Amenities**
  - ▶ natural resources (weather, beaches, mountains, hazards)
  - ▶ parks, museums, sports teams, the arts
  - ▶ transportation infrastructure, continuing education
  - ▶ great public schools!
  - ▶ test: **Are residents willing to pay higher home prices?**
- **Moderate taxes**

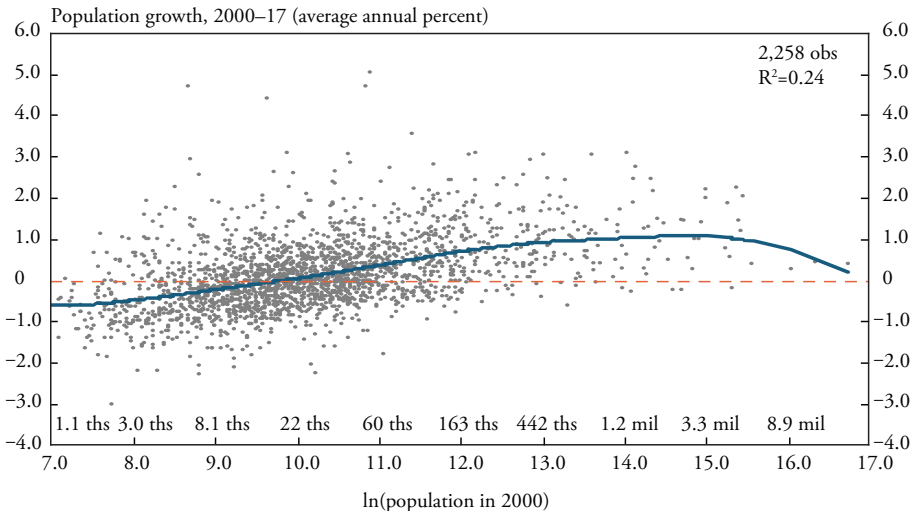
## Benefits of Size: Can boost productivity and amenities!

- **Sharing** (no change)
  - ▶ infrastructure (airports, seaports, rail connections, utilities, ...)
  - ▶ civic amenities (museums, zoos, performance arenas, sports stadiums, ...)
  - ▶ risk (across businesses and industries)
- **Matching** (perhaps less benefit than before)
  - ▶ workers to jobs (skills to needs, dual career couples, flexible hours)
  - ▶ residents to services (restaurants, stores, continuing education, ...)
  - ▶ businesses to services (law, advertising, banking, venture capital, ...)
  - ▶ patients to doctors (specialization)
- **Learning** (unclear)
  - ▶ generation of specialized knowledge (R&D, science, medicine)
  - ▶ diffusion of knowledge: (medicine, entrepreneurship, finance, ... “the mysteries of the trade become no mysteries; but are as it were in the air”)

## Costs of Size:

- **STRATOSPHERIC HOUSING PRICES AND RENTS**
- **MADDENING TRAFFIC CONGESTION**
- **CONGESTION OF EVERYTHING ELSE**
  - ▶ **hours-long TSA waits**
  - ▶ **packed public transit**
  - ▶ **crowded sidewalks**

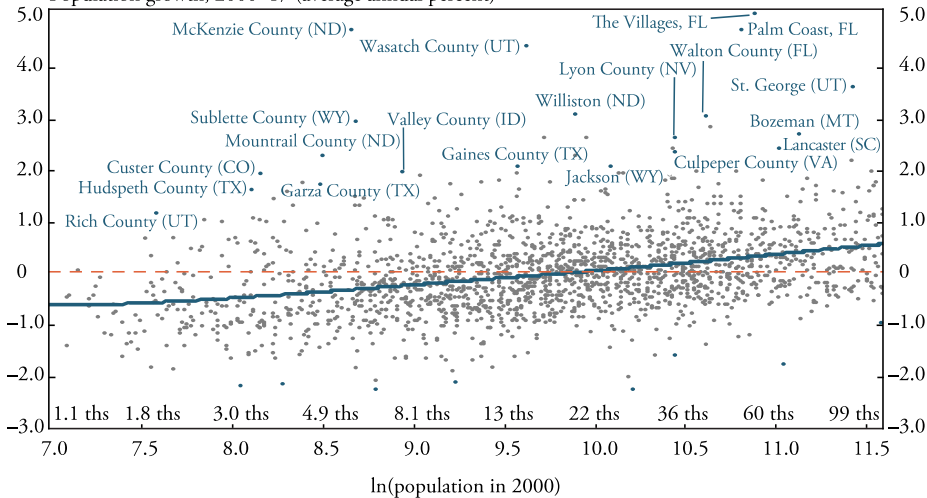
## Medium-sized metros have been growing fastest (pop., 2000–17)





## Small locations that grew fastest benefitted from “special circumstances”

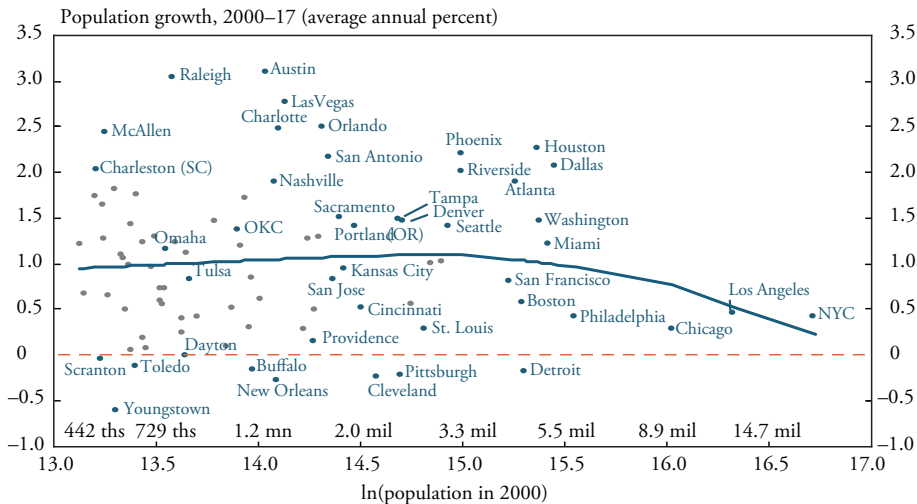
Population growth, 2000–17 (average annual percent)



## Special circumstances benefitting small locations (not amenable to policy!)

- **nice weather**
  - ▶ warmer winters
  - ▶ cooler, less humid summers
  - ▶ less rainy days
- **mountains**
- **ocean coast**
  
- **shale basin**
  
- **near medium or large metro area**
- **university**

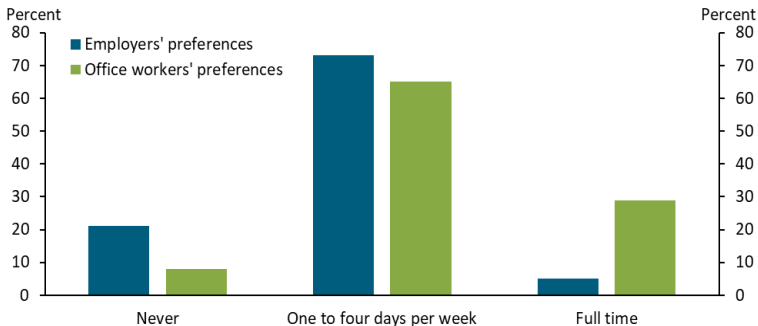
# Largest metropolitan areas grew slowly



## Hybrid Officing: Some Days On Site, Some Days Remote

- Feasible for about one third of jobs
- **Workers remain tethered to employer offices**

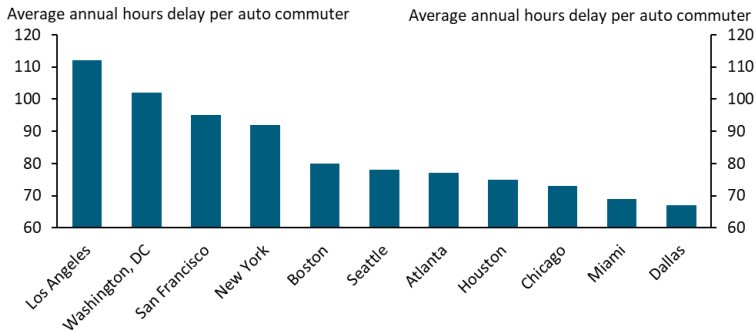
Chart 1: After the Pandemic, Office Workers Are Likely to Work Remotely One to Four Days per Week



Source: PwC (2021).

## Loosening the Tether

- fewer weekly commutes
- lower daily volume increases speed (most where congestion was worst)
- increases willingness to live *moderately* far from employer (probably most important for family households)



Note: The Los Angeles metro includes Riverside-San Bernadino; the San Francisco metro includes San Jose.

Sources: Schrank, Eisele, and Lomax (2019) and author's calculations.

# Hybrid officing changes some of the benefits and costs of size

## Benefits of Size:

- unchanged sharing benefits (infrastructure, civic amenities, risk)
- mostly unchanged labor-market matching
- diminished matching benefit for some services (retail? education? medicine? law? advertising?)
- mostly unchanged learning benefits? (generating specialized knowledge, diffusion of knowledge)

## Costs of Size

- diminished time and monetary costs of commuting (less frequent, less congested)
- increased disutility of high housing prices: (increased demand for home-office space)

## Implied changes for equilibrium size

- Largest metros may grow even larger: can expand outward into lightly settled distant suburbs
  - ▶ Central cities may need to rely more on amenities that attract and retain young-adult households
  - ▶ Apartment rents in central cities may be lower than before
    - ▷ attracts households from smaller metro areas
    - ▷ encourages household formation
- Small locations with high amenities or that are near a large metro area may grow larger
- Ambiguous effect on medium-sized metro areas.
  - ▶ diminished commuting advantage relative to large locations
  - ▶ increased importance of lower housing prices than in biggest metros
    - ▷ but prices may differ by less
  - ▶ likely increase in importance of amenities

## Hybrid officing favors locating in the center of metro areas

- Erodes the advantages of suburban locations
  - ▶ closer commutes less important
  - ▶ more parking less important
  - ▶ lower rents less important
    - ▷ if space requirement is lower(?)
    - ▷ if aggregate rent is lower (?)
- Amplifies the advantages of central locations
  - ▶ accessibility from residences throughout metropolitan area
    - ▷ increased spousal labor force participation
  - ▶ increases importance of in-person contact when on site
  - ▶ increases attractiveness of nearby urban amenities



# Takeaways

- **Rethinking which metro area to locate in**
  - ▶ Depends on fundamentals: productivity, amenities, taxes
  - ▶ Benefits of size: can increase productivity and amenities
  - ▶ Costs of size: high rents, traffic, other sorts of congestion
  - ▶ Hybrid officing ameliorates the costs of size and so favors larger metro areas
  - ▶ Small locations with high amenities may also benefit
- **Rethinking where to locate within metro areas**
  - ▶ shift to more distant suburbs by family households
  - ▶ lower rents in center attract young-adult households
  - ▶ possible shift in offices from suburban to central locations
- **Transition may take decades**
  - ▶ considerable experimenting to determine what works
  - ▶ overlaps with downsizing by baby boomers (increased demand for multifamily)
  - ▶ overlaps with spread of autonomous vehicles (less-costly commutes, less parking)