

# Consumption Zones

Paper by Batch, Bridgman, Dunn, and Gholizadeh

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The analysis and conclusions set forth here are those of the author and do not indicate concurrence by members of the Federal Reserve staff or the Board of Governors.

# Big insights and facts

- Political units are not markets
- Consumption markets are not labor markets → Commuting zones are not general purpose economic units!
- 2/3rds of consumer spending\* is local (same county), 90% within 100 miles
  - Most local: Food & beverage stores
  - Least local: Live entertainment
  - More Food & beverage zones than live entertainment zones
  - Nondurables more local than durables
- ConZs are smaller than CZs (note this is partly a choice based on external literature)
  - But... While some ConZs are the same size as CZs, they often only partially overlap
- **ConZs are a general purpose technology for spatial economics**

# Today's points

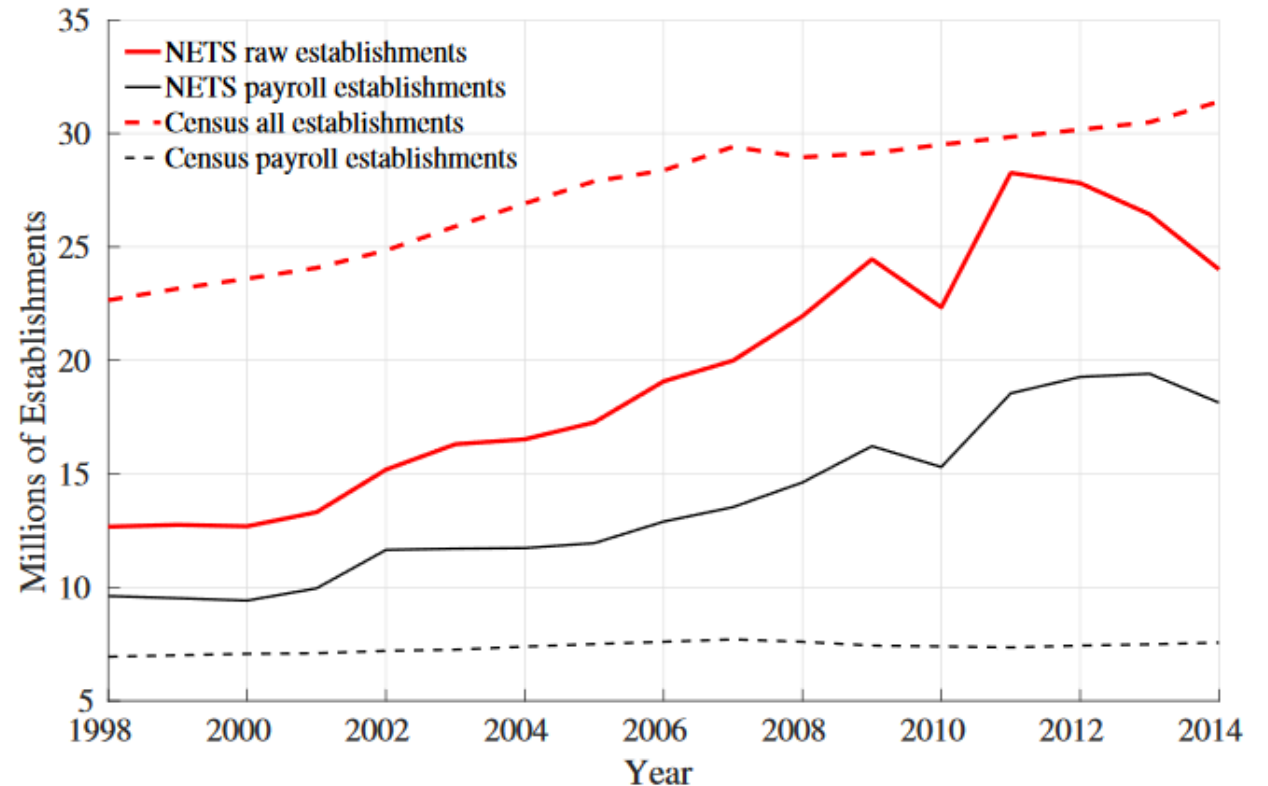
1. Concentration exercises using NETS data
2. Counties are not great
3. Some potential uses of ConZs
4. Miscellaneous

# 1. NETS data

- Use NETS sales data to measure concentration in ConZs vs. political units
  - (note: NETS is D&B with extra longitudinal processing)
- NETS/D&B advantages:
  - Microdata without access or disclosure restrictions (just \$\$\$)
  - Firm identifiers well suited to measuring geographic footprint of firms
  - Static distribution of “employer” activity looks reasonably similar to CBP/QCEW (Barnatchez, Crane, Decker 2017)
- This paper avoids certain key limitations of NETS: business dynamics; mining/construction/manufacturing

# Some NETS cautions

- NETS universe is unknown; more than employers, less than the Census universe (Barnatchez, Crane, Decker 2017)
- Sales data appear mostly imputed from employment data
  - Likely the main reason for discrepancy between Autor, Van Reenen, Patterson (2023) and Rossi-Hansberg, Sarte, & Trachter (2020)



Source: NETS database, County Business Patterns, Census Nonemployer Statistics.  
Note: NETS sample restricted to CBP industry scope.

Source: Barnatchez, Crane, & Decker 2017

# Sales data in NETS

- Sales imputation flags indicate prevalent imputation
  - 95% of estabs of multi-unit firms have imputed sales

Source: Crane and Decker (2020)

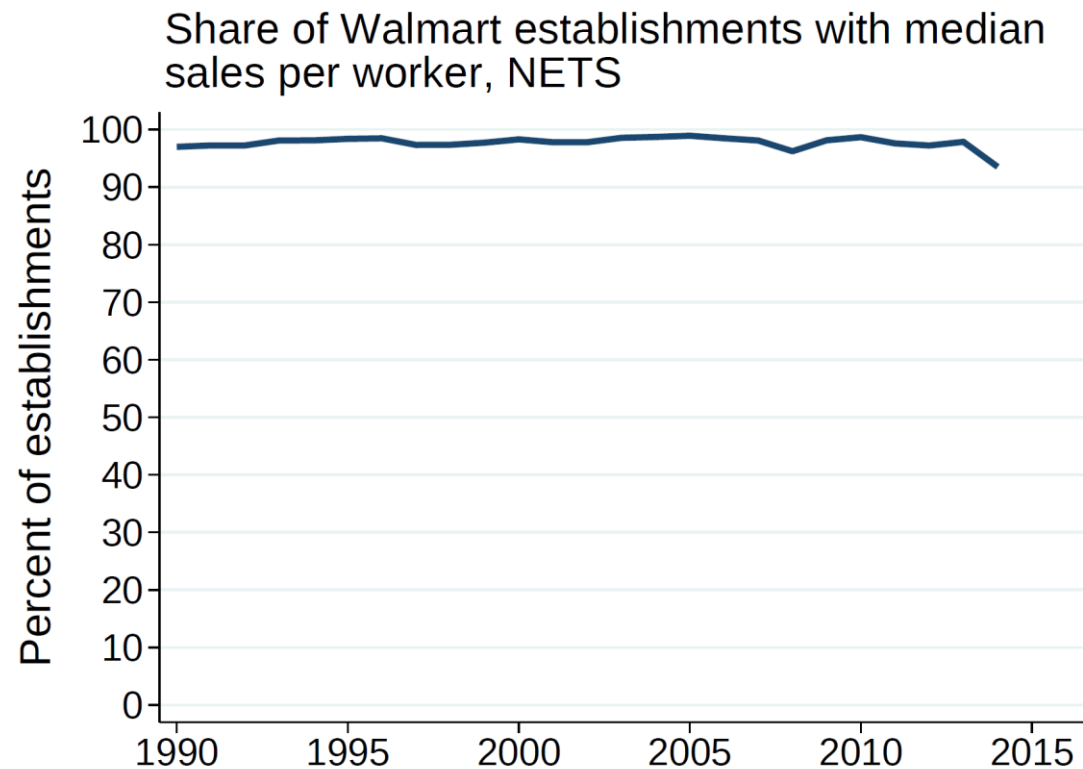
Firm size (employees)	Year	
	2000	2014
1 to 4	80	80
5 to 9	78	85
10 to 19	77	82
20 to 49	79	84
50 to 99	85	88
100 to 249	89	91
250 to 499	93	94
500 to 999	94	94
1,000 to 2,499	93	93
2,500 to 4,999	95	92
5,000 to 9,999	95	94
10,000+	96	94

Source: NETS

Notes: Percent of firms with imputed establishment sales data.

Table 1: Establishment sales imputation rates

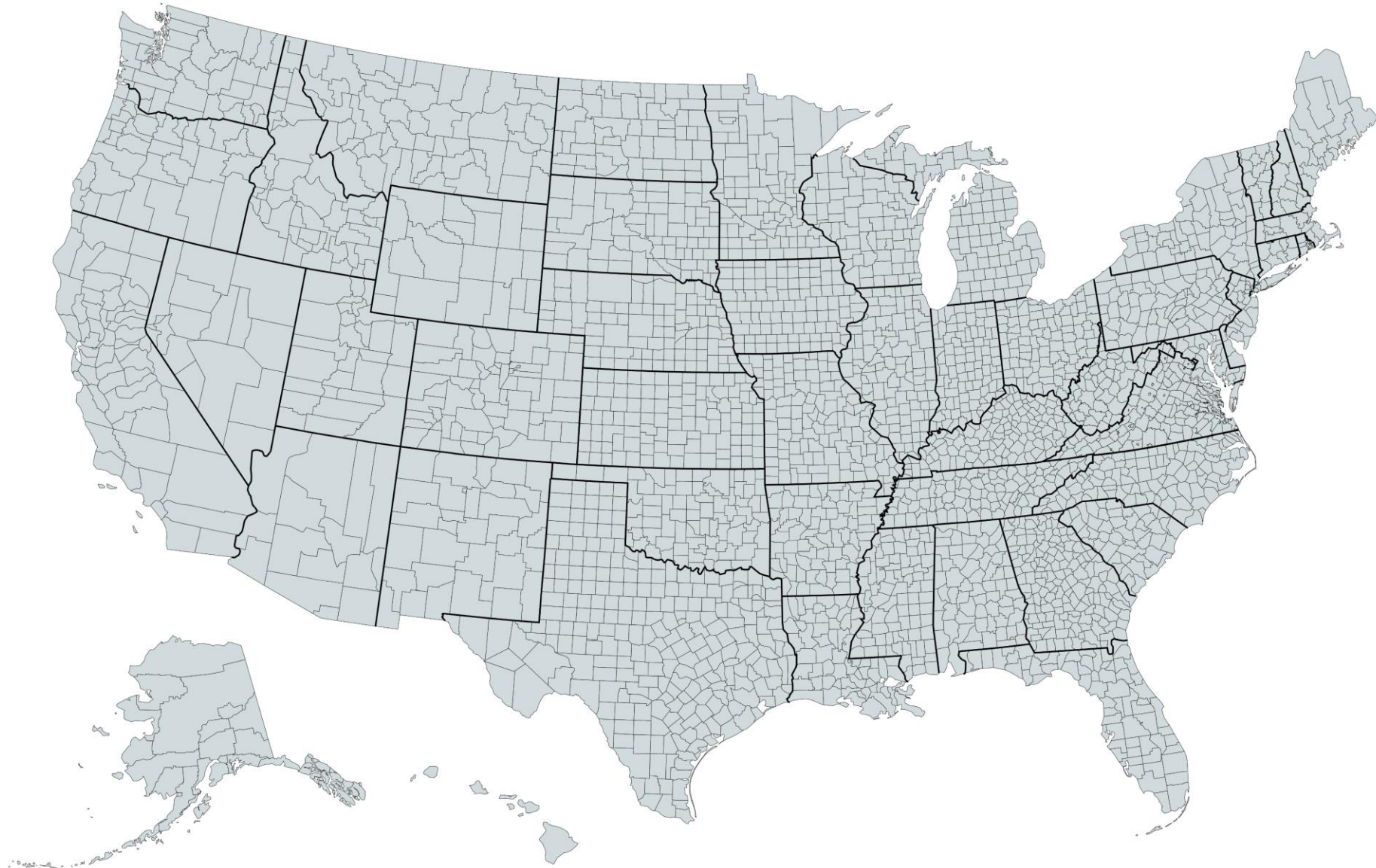
- Sales data appear to just reflect employment
  - NETS has low sales/worker dispersion relative to LBD, and gap rises over time (Crane & Decker 2020)
  - Example: Walmart
  - → **“Sales” concentration is actually employment concentration**



# What to do about NETS?

- Difficult to interpret sales concentration results from NETS
- Yet, this is a very important application for ConZs
- Solution may require Economic Census microdata

## 2. Counties are not great

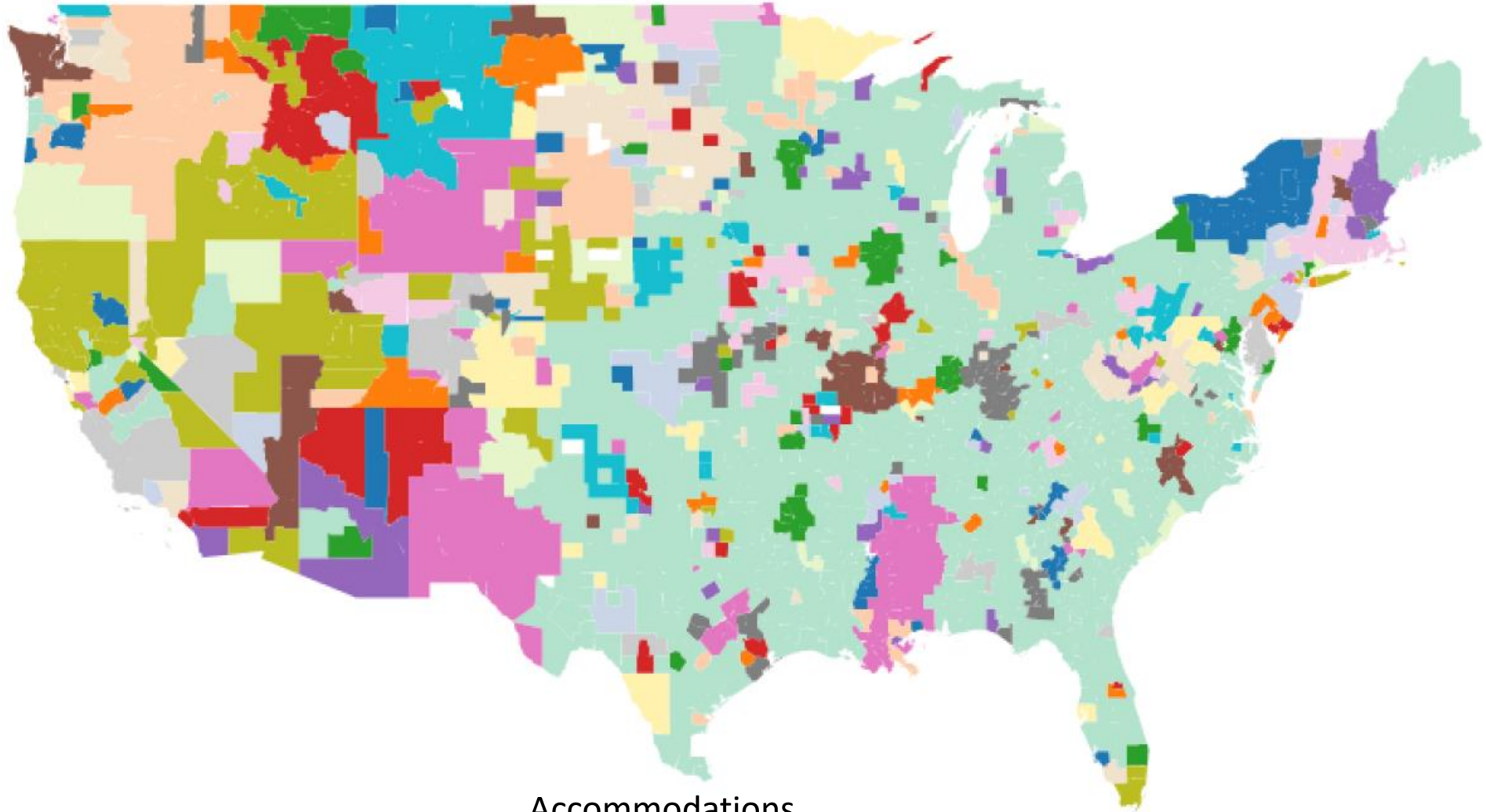




# Counties

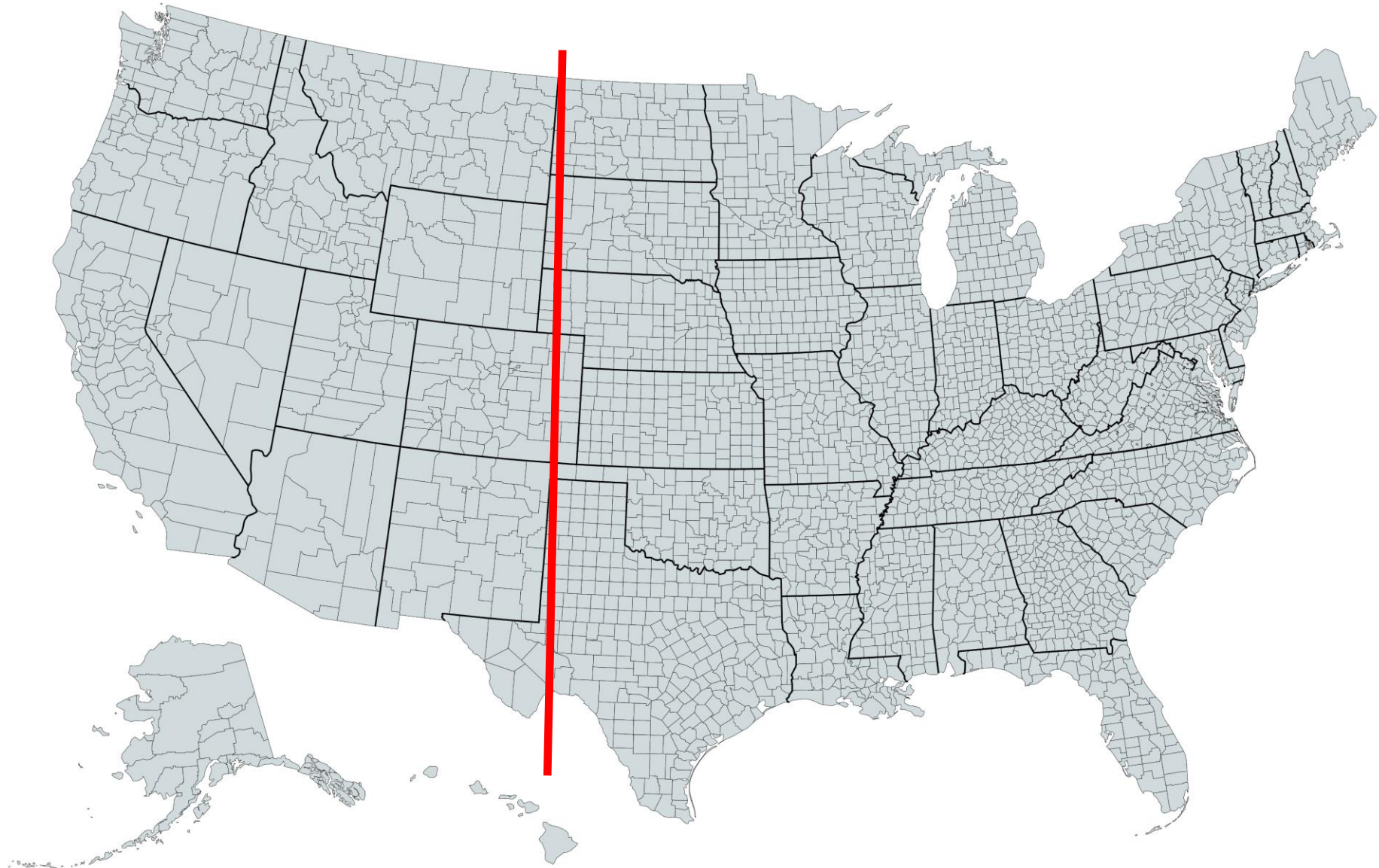
- County size varies a lot by region and state
- Authors take this seriously and indeed it motivates the consumption zone project
- But ultimately counties are still the core unit of analysis, which may have undesirable consequences
  - ConZs overcome challenge of “political units” by... combining political units

# Accommodations ConZs



# Ideas for pushing on this

- Can you get zip code data?
  - Finer geographic detail, (perhaps) a bit more consistent across region
  - ...but interfaces with fewer other datasets
- Increase understanding of the role of counties in threshold determination
  - Split the country in two (i.e., treat eastern US as entire country)
  - Rerun distance analysis, apply external criteria
  - Does optimal distance threshold vary, eastern US vs western US?



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# 3. Some potential uses of ConZs and related work

- Local spending responses (e.g., housing wealth in Dunn & Gholizadeh 2023)
- “Local” industry concentration measurement (this paper)
  - Robust literature on trends in local industry—and product—concentration: Rossi-Hansberg, Sarte, Trachter (2021), Rinz (2022), Smith & Ocampo (2022), Autor, Patterson, Van Reenen (2023)
- “Trade”ables/nontradeables taxonomy (it’s a spectrum!)
- Relationship between ConZs and firm location decisions
  - Market exposure diversification (e.g., Decker, D’Erasmus, Moscoso-Boedo 2016)
  - Does multi-unit firms’ estabs per ConZ vary by industry?
- Natural disasters
  - Common approach to real-time natural disaster impact estimation: quantify activity by industry at county level (use CBP, QCEW, etc), get disaster impact estimates from FEMA, do brute force simple math, make guesses about spillovers and makeup production (e.g., Bayard, Decker, Gilbert 2017 for IP)
  - ConZs and related work tell us about elasticities across localities, potential for immediate reallocation of spending to safer areas, etc.

## 4. Miscellaneous thoughts

- ConZ's defined based on 2015 data; would they look different today? (esp. given rising online retail, omitted from paper)
- What are implications for how we think about competition policy?
  - Presumably merger guidelines are based on some assumption about geographic market size, i.e., endogenous to this question
  - Do the paper's merger guideline analyses suggest something about appropriate policy response, or do they suggest the merger guidelines are defined wrong?
- Industry coverage: 79% of PCE excl. housing, health care, financial services.
  - Missing **motor vehicles** (~4% of PCE). Can you get this from Polk registration data?
  - What about **ecommerce** (NAICS 454, formerly)
    - NAICS 2022 transition breaks the time series anyway

# Thanks

- ConZs are a great idea with numerous potential applications