

# Initial Results from the Continuous Count Study

## A Transformation and Modernization Priority

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This research is joint work with David Brown, Adam Hall, Michael Ikeda, Timothy Kennel, Wendy Martinez, Jerry Maples, Tom Mule, and the Continuous Count Study Team

DISCLAIMER: Any opinions and conclusions expressed herein are those of the authors and do not represent the views of the U.S. Census Bureau. The Census Bureau has ensured appropriate access and use of confidential data and has reviewed these results for disclosure avoidance protection (CBDRB-FY24-0196).

# Goals of the Continuous Count Study (CCS)

- Use administrative data to produce annual population estimates at lower levels of geography than are available in official annual population estimates from the Population Estimates Program (PEP)
- Assess the availability, quality, and utility of administrative data for population estimates and the 2030 Census

# Components of the Continuous Count Study

1. Annual Administrative Record Population Estimates (AAPE)
  - Quantify availability and utility of administrative data for population estimates and 2030 Census use cases
  - Use administrative data to produce full population list each year
  - Begin with extract from Demographic Frame and add enhancements

# Components of the Continuous Count Study

## 1. Annual Administrative Record Population Estimates (AAPE)

- Quantify availability and utility of administrative data for population estimates and 2030 Census use cases
- Use administrative data to produce full population list each year
- Begin with extract from Demographic Frame and add **enhancements**

A key enhancement: Include people whose administrative records lack geocoded tracts. Impute their tracts of residence on the reference date.

# Components of the Continuous Count Study

## 1. Annual Administrative Record Population Estimates (AAPE)

- Quantify availability and utility of administrative data for population estimates and 2030 Census use cases
- Use administrative data to produce full population list each year
- Begin with extract from Demographic Frame and add enhancements
- Different from PEP: not postcensal estimates based on 2020 Census data
- Produce estimates from full population list and from partial lists excluding people with incomplete geographic data

# Components of the Continuous Count Study

## 2. Comparison estimates from alternative methodologies

- Assess coverage and quality of AAPE estimates
- Example: Calibrated Administrative Record Dual System Estimates (Calibrated Adrec DSE)
  - Produce base-year estimates from 2020 Census and 2020 Demographic Frame extract
  - Move results forward using estimated tract- and county-level growth rates from Demographic Frame extracts and PEP

# Components of the Continuous Count Study

## 2. Comparison estimates from alternative methodologies

- Assess the quality of alternative methodologies, including APE estimates
- Examine the quality of alternative methodologies, including APE estimates (Calibrated DSE methodology and estimates, please attend the talk by Timothy Kennel tomorrow (Friday, May 17) at 8:00 am in Room 220.
- Produce alternative estimates, including demographic
- Measure the quality of alternative methodologies, including growth rates from Demographic Frame extracts and PEP

To learn more about the Calibrated Adrec DSE methodology and estimates, please attend the talk by Timothy Kennel tomorrow (Friday, May 17) at 8:00 am in Room 220.



# Initial release of results

## Reference dates

- April 1, 2020
- July 1, 2021

## Geography

- Nation
- State
- Census tract

## Age

(2 categories)

- 0-17
- 18+

## Race and Hispanic origin

(8 categories)

- Hispanic
- Non-Hispanic White alone
- Non-Hispanic Black alone
- Non-Hispanic American Indian or Alaska Native (AIAN) alone
- Non-Hispanic Asian alone
- Non-Hispanic Native Hawaiian or Pacific Islander (NHPI) alone
- Non-Hispanic some other race alone
- Non-Hispanic multiracial

# National estimates

	2020 Census (2020) / PEP (2021)	AAPE		Calibrated Adrec DSE
		Excluding imputed tracts	Including imputed tracts	
April 1, 2020				
Total population	331,449,281	325,300,000	334,900,000	332,500,000
Percent difference		-1.9	1.0	0.3
July 1, 2021				
Total population	332,031,554	324,500,000	334,900,000	333,000,000
Percent difference		-2.3	0.9	0.3

Notes: A positive percent difference means the CCS estimate exceeds the official estimate.

Source: 2020 Census Demographic and Housing Characteristics File (DHC), Population Estimates Program (PEP) vintage-2022 estimates for July 1, 2021, and Continuous Count Study.

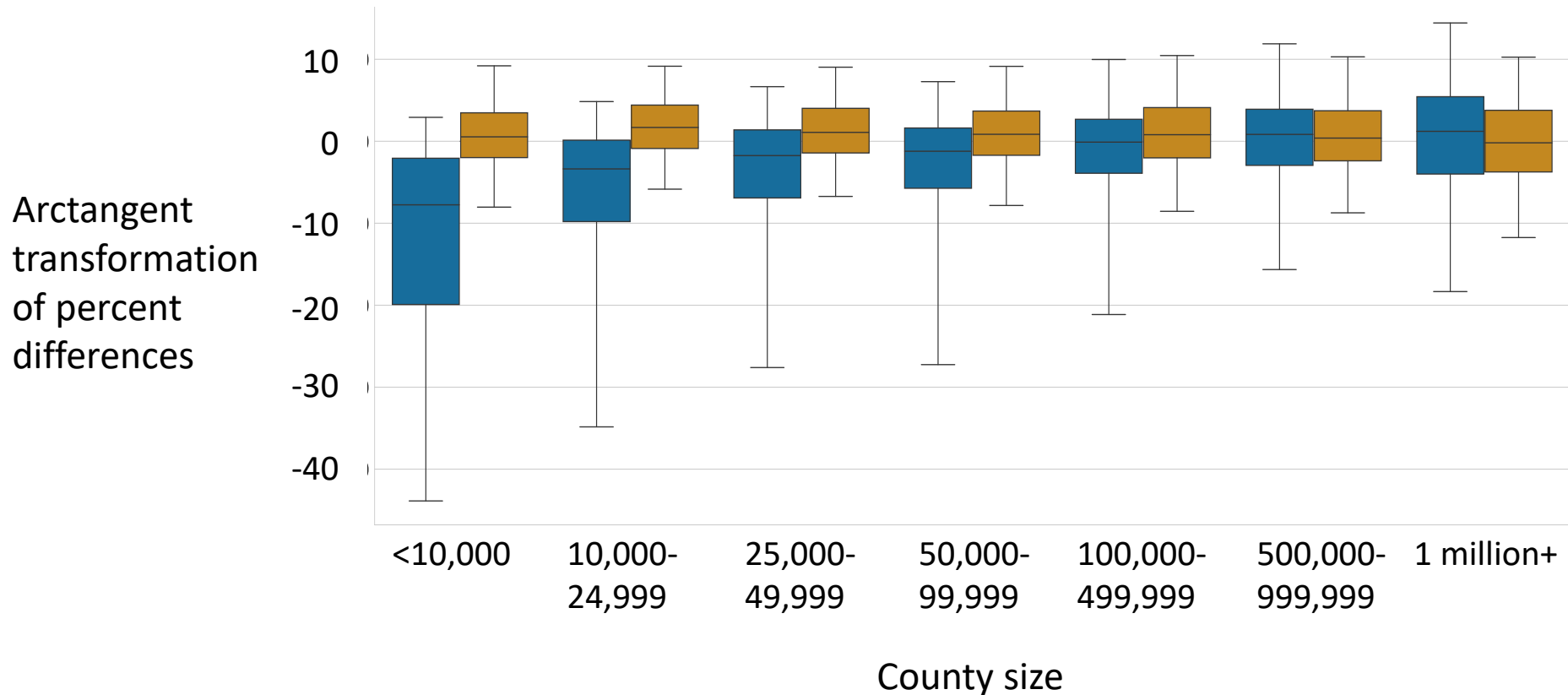
# Tract-level estimates

Does the availability of administrative records for a tract depend on the size of the county where the tract is located?

We group counties by size as follows.

< 10,000	100,000-499,999
10,000-24,999	500,000-999,999
25,000-49,999	1 million+
50,000-99,999	

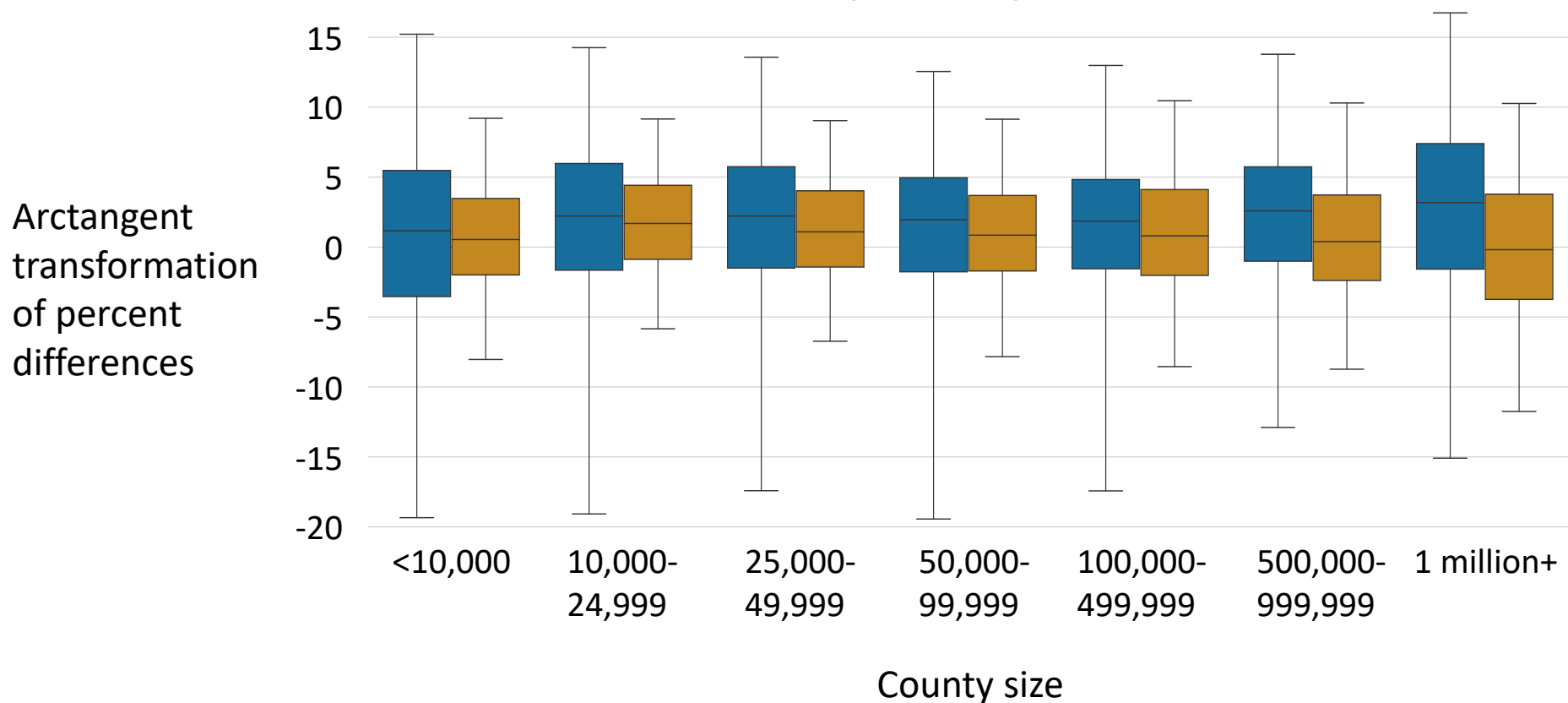
## Distributions of tract-level percent difference with 2020 Census, **AAPE excluding imputed tracts** versus **Calibrated Adrec DSE**, by county size



Notes: Boxplot whiskers are truncated at 5 and 95 percent.

Source: 2020 Census Demographic and Housing Characteristics File (DHC) and Continuous Count Study.

## Distributions of tract-level percent difference with 2020 Census, **AAPE including imputed tracts** versus **Calibrated Adrec DSE**, by county size



Notes: Boxplot whiskers are truncated at 5 and 95 percent.

Source: 2020 Census Demographic and Housing Characteristics File (DHC) and Continuous Count Study.

# 2030 Census planning and possible use cases



Produce administrative record-based population estimates



Run alternative estimates to assess their quality



Identify areas with higher administrative record coverage



Identify areas where we may need to pursue additional sources



Use results to inform contact strategy

# Summary of Continuous Count Study

- Produced administrative record-based population estimates for nation, states, and tracts
- Developed an estimation approach to assess estimates, including for tracts
- Working to produce these estimates for a July 1, 2022, reference date
- Conducting ongoing research to develop the methods to produce these estimates
- Showing how results like these can help support 2030 Census planning by providing information on an ongoing basis about the availability and fitness-for-use of administrative data
- More information is available at the Continuous Count Study website

<https://www.census.gov/about/adrm/linkage/projects/continuous-count-study.html>

# Thank you!

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