



Rural Population Research Network

A USDA supported multi-state research project on the causes and consequences of demographic change in rural America

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Brief # 2022-5

Delta Population Change Has Implications for Weathering the Future

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Often described as a uniform region, the multi-state Mississippi Delta has experienced diverse population changes that are important to understand for shaping more effective policy responses. An area rich in natural resources and agricultural productivity, the Delta also faces challenges associated with poverty, population decline, and a long history of environmental disasters, such as flooding.^{1,2} Population loss may exacerbate these problems as communities will have fewer financial resources for maintaining infrastructure and public services critical to quality of life.

This brief uses measures of population change to compare non-Delta and Delta counties and parishes (hereafter counties) across eight states (Alabama, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri, and Tennessee, Figure 1) and to investigate these patterns across the rural-urban continuum.

Delta Counties Experienced Greater Population Loss than Non-Delta Counties between 2010 and 2020



Figure 1. Delta Region States and Counties

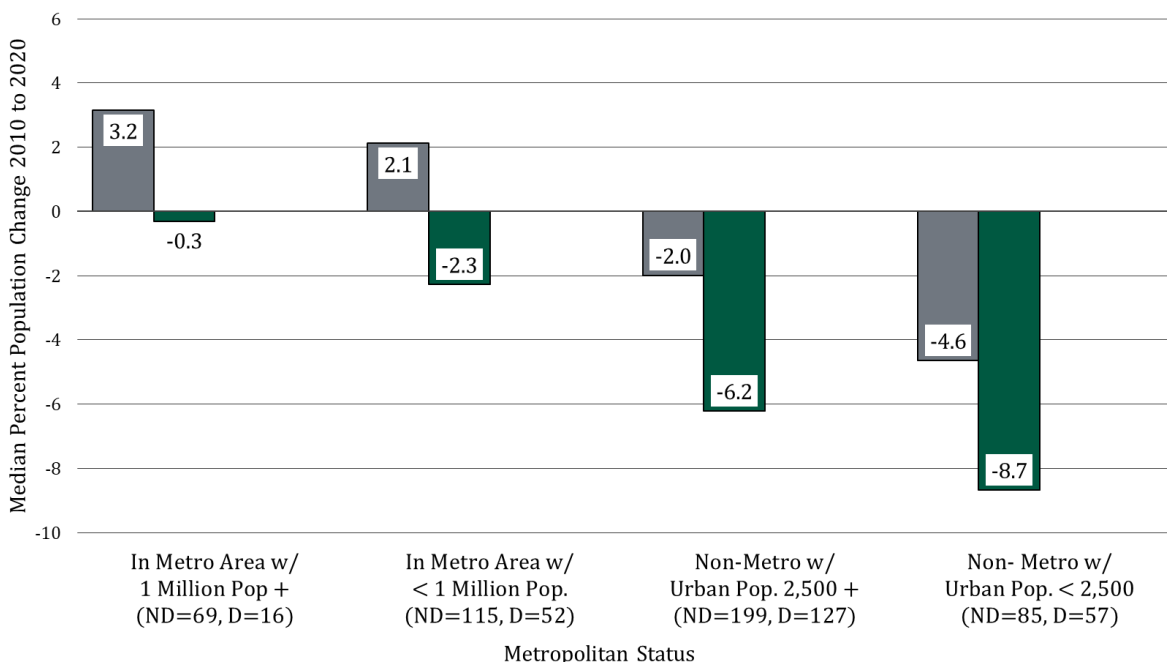
KEY FINDINGS

- Much of the multi-state Delta region experienced population loss and out-migration in the past decade.
- Population shrinkage was greatest in rural places.
- This loss reduces the economic base needed to maintain and improve public infrastructure and services.
- Regions experiencing these changes require attention to adapt to future environmental challenges.

Focusing on the multi-state Delta region, there were differences in population change between 2010 and 2020. Overall, the median population change in 468 non-Delta counties was -0.9 percent (ranging from -17.5 to 47.6), while it was -5.7 percent in Delta counties (from -36.4 to 21.9). While there were instances of both population loss and population increase in both areas, there were overall patterns of less growth/greater loss in the Delta.

Population Loss Varied by Delta Location and Metropolitan Status

The non-Delta/Delta patterns varied by metropolitan status (Figure 2). Median percent population change in non-Delta metropolitan counties was positive, as compared to negative median percent change in Delta metropolitan counties. Although both non-Delta and Delta non-metropolitan counties tended to have population decline, the changes were particularly stark in the Delta.



*Delta Regional Authority States: Alabama, Arkansas, Illinois, Kentucky, Louisiana, Missouri, Mississippi, and Tennessee. Non-Delta (ND) Counties=468, Delta (D) Counties=252. Metropolitan Status based on U.S. Department of Agriculture/Economic Research Service Rural Urban Continuum Codes (2013). Percent population change calculated from 2010 and 2020 Decennial Censuses.

Figure 2. Median County-Level Percent Population Change 2010 to 2020 by Delta Location and Metropolitan Status

Data Source: Census 2010 and 2020

Consistent Annual Out-Migration is a Major Concern

Population change includes births, deaths, and migration. Domestic net-migration (the balance of domestic residents moving into versus out of an area) is an important indicator for community development. It represents people's decisions in the face of both livelihood opportunities and constraints.

A substantial share of counties in the Delta experienced domestic net out-migration during most of the years from 2010 to 2020. Specifically, 57.6% of Delta counties (145) did so for 8 or more years (Figure 3).

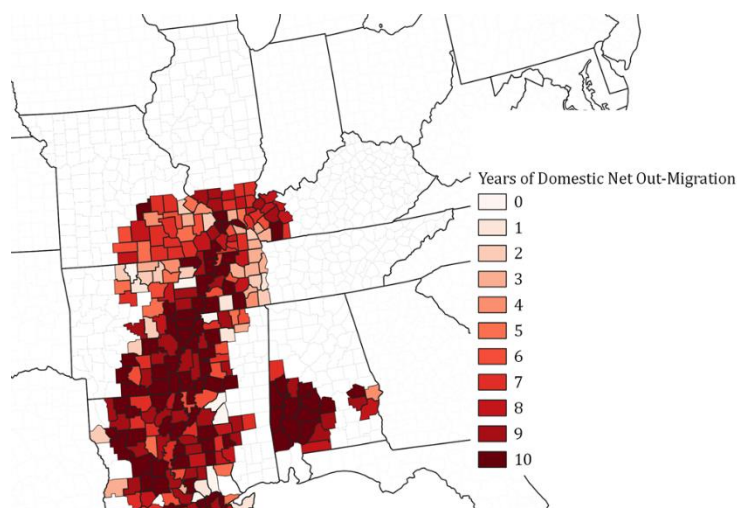


Figure 3. Annual Domestic Net Out-Migration in the Delta, 2010 to 2020

Data Source: Census Population Estimates (2020)

Note: Delta Counties=252

Regional Challenges Require Regional Solutions

Rural America is not monolithic, and there are differences between and within regions. Better understanding population change is important for community development planning because of the resources needed for public infrastructure and services, especially in disaster prone areas. Although population increases also present pressures that must be addressed, population shrinkage (also referred to as depopulation³) is critical, given the economic and tax base necessary to support maintenance and improvements of systems originally created for larger populations. Disregarding these issues may lead to further deterioration and exacerbate depopulation across the rural-urban continuum.

Policy implications include considering multi-dimensional (Delta region *and* the rural-urban continuum) population change in making programmatic decisions and addressing the fiscal needs for public infrastructure and services using regional approaches that transcend state and rural-urban divides and unite community leaders from across a region.

Data and Methods

Data were obtained from the U.S. Census Bureau, including the 2010 and 2020 Decennial Censuses and Population Estimates and Components of Change (vintage 2020). Delta states and counties were based on the Delta Regional Authority definition. Metropolitan status was measured through U.S. Department of Agriculture Economic Research Service's Rural-Urban Continuum Codes (vintage 2013). Analyses were conducted by the author. Given concerns over coverage of the 2020 Census, population change was replicated using comparisons between 2010 and 2020 Population Estimates. There were some differences in values, but the overall patterns were consistent.

References

1. Collins, Janelle (Ed.). 2015. *Defining the Delta: Multi-disciplinary Perspectives on the Lower Mississippi River Delta*. Fayetteville, AR: The University of Arkansas Press.
2. Saikku, Mikko. 2005. *This Delta, This Land: An Environmental History of the Yazoo-Mississippi Floodplain*. Athens,

GA: The University of Georgia Press.

3. Johnson, Kenneth M. and Daniel T. Lichter. 2019. "Rural Depopulation: Growth and Decline Processes Over the Past Century." *Rural Sociology* 84(1): 3-27. doi: 0.1111/ruso.12266.

Acknowledgments

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