

District Data Brief

Urban and Regional Migration Estimates, Fourth Quarter 2023 Update

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This Data Brief updates the figures that appeared in the Cleveland Fed District Data Brief “Urban and Regional Migration Estimates: Will Your City Recover from the Pandemic?” with data for Q4:2023 for all series. The first series measures net migration of people to and from the urban neighborhoods of major metro areas. The second series covers all neighborhoods but breaks down net migration to other regions by four region types: (1) high-cost metros, (2) affordable, large metros, (3) mid-sized metros, and (4) small metros and rural areas. The metro area definitions used here are the combined statistical areas, which group adjacent regions like Cleveland, Akron, and Canton together.

Recent trends in urban neighborhood migration

- The national aggregate of net migration out of urban neighborhoods (Figure 1) continued to slow, reaching 113.8 thousand per quarter in the Q4:2023 estimate. This pace is 8 percent faster than what the prepandemic trend would have implied, 105.5 thousand net outmigrants.
- Among the metro areas where urban neighborhoods have made the least recovery in their net migration, Q4:2023 saw modest improvements for Las Vegas, Seattle (Figure 3), and Sacramento (Figure 4). In Phoenix and Portland (Figure 3), net outflows from urban neighborhoods increased in the latest estimates.
- Washington–Baltimore (Figure 2), Cleveland (Figure 4), and St. Louis (Figure 5) have experienced net outmigration from their urban neighborhoods that has been slower postpandemic than their prepandemic trends would have predicted. In the Q4:2023 observation, all three displayed continued slowing of net outmigration.

The views expressed in this report are those of the author and do not necessarily reflect the views of the Federal Reserve Bank of Cleveland or the Board of Governors of the Federal Reserve System.

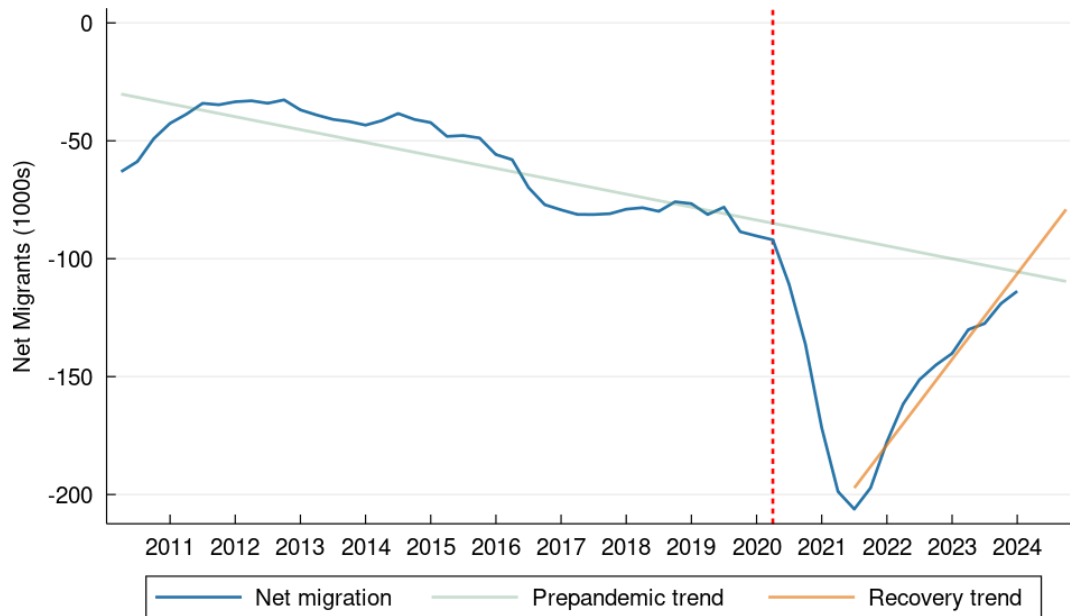
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Net Migration to and from Urban Neighborhoods

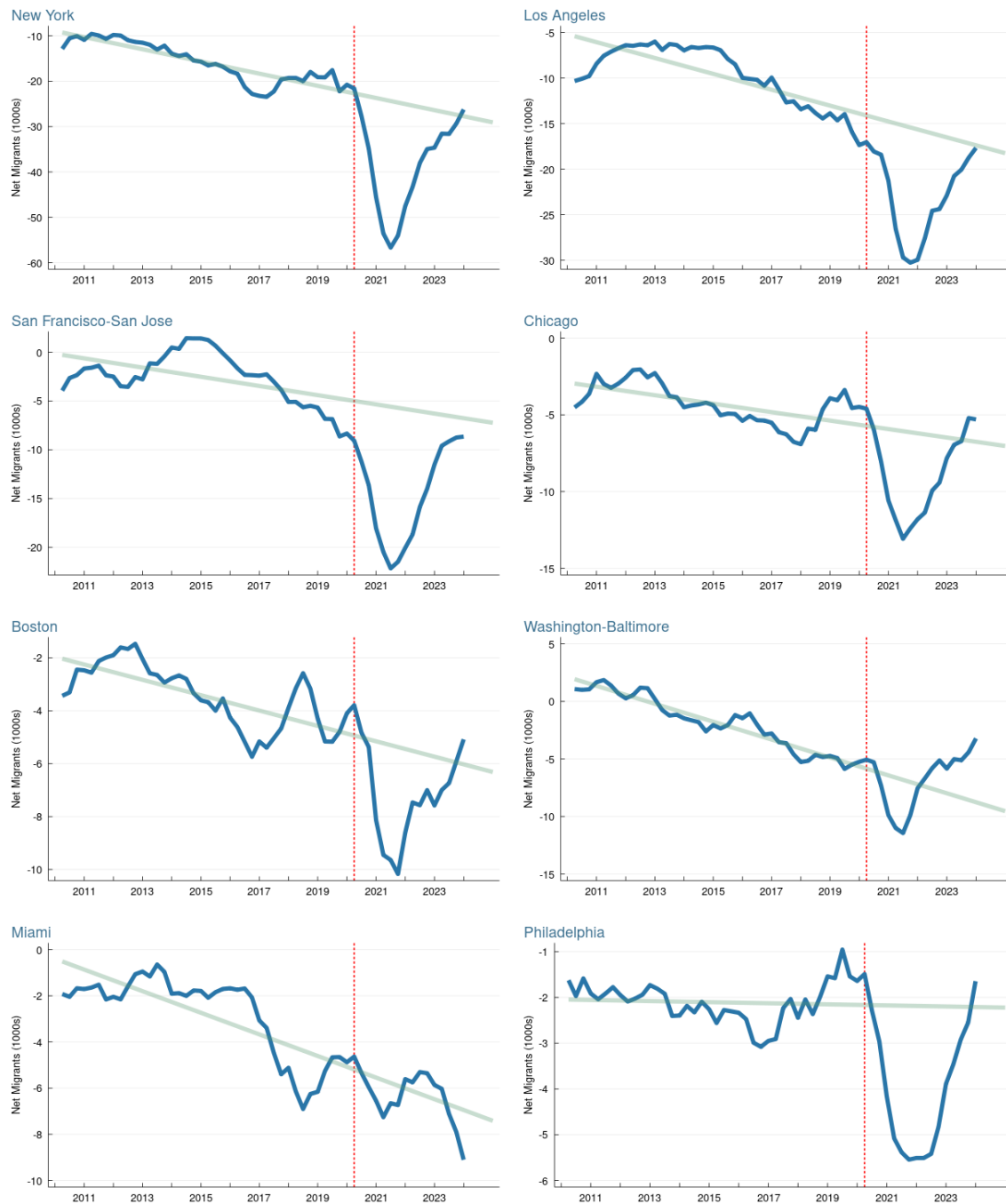
Figure 1: Four-Quarter Moving Average of Quarterly Net Migration to and from Urban Neighborhoods



The red vertical line indicates the beginning of the pandemic. The prepandemic trend is the line that best fits the prepandemic (2010:Q1 to 2019:Q4) observations. The recovery trend is the line that best fits the 2021:Q2 to 2023:Q4 observations. Sources: Federal Reserve Bank of New York/Equifax Consumer Credit Panel, US Census Bureau, and author's calculations.

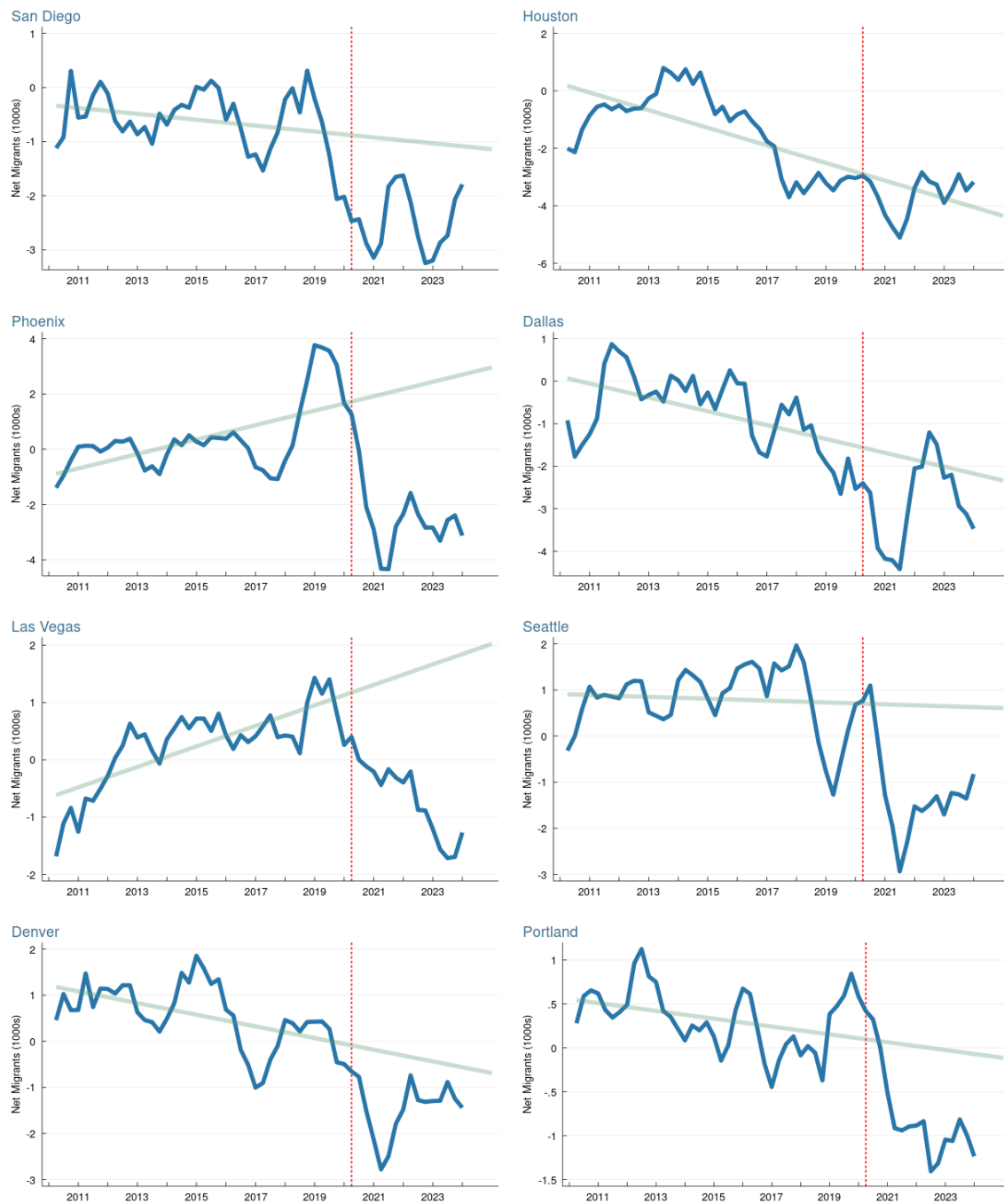
Figures 2 to 6 below present metro areas in descending order of their urban populations.

Figure 2: Four-Quarter Moving Average of Quarterly Net Migration to and from Urban Neighborhoods, Urban Populations of 13.3 Million to 2.2 Million



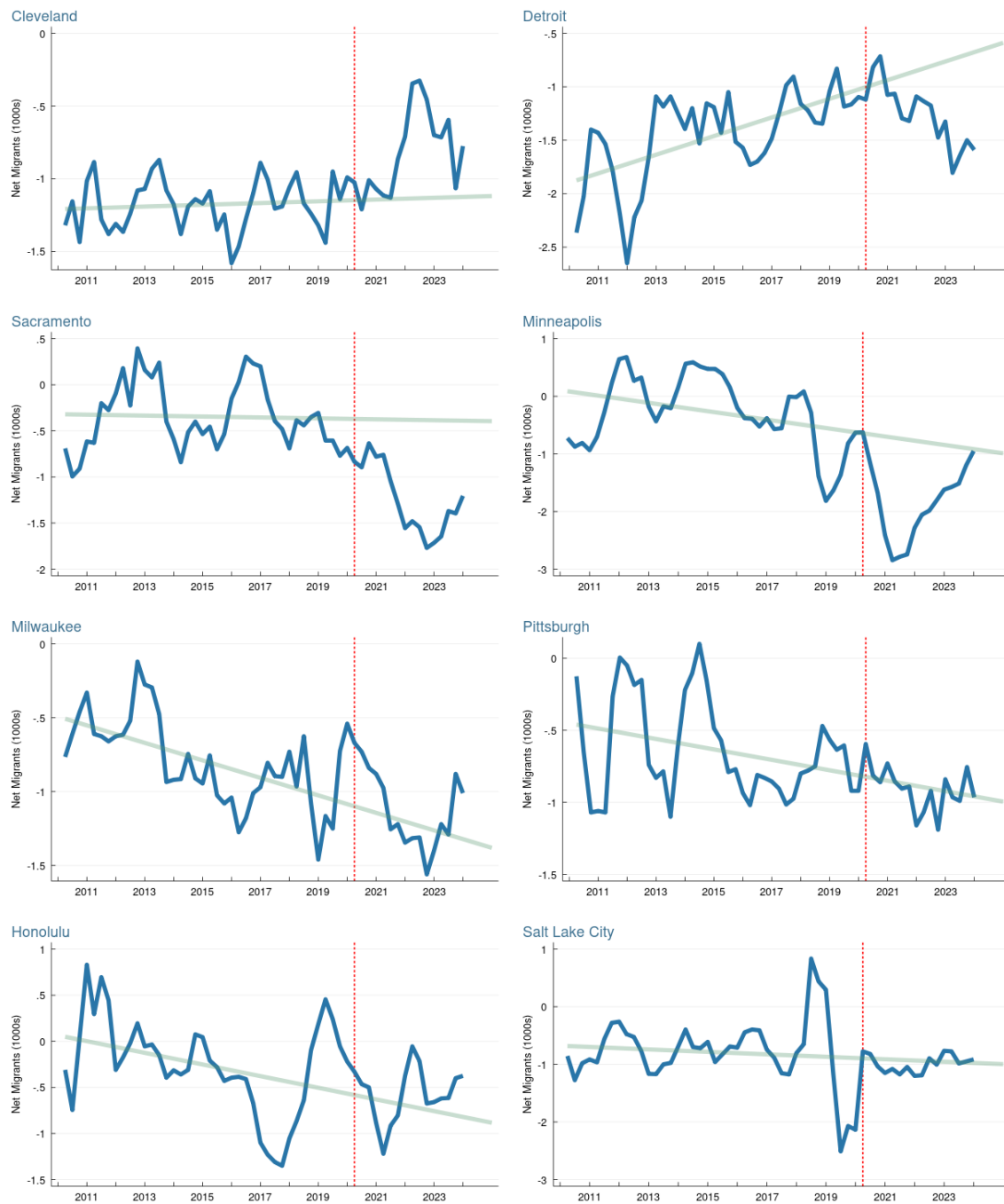
The red vertical line indicates the beginning of the pandemic. The green line is the pre-pandemic (2010:Q1 to 2019:Q4) trend. Sources: Federal Reserve Bank of New York/Equifax Consumer Credit Panel, US Census Bureau, and author's calculations.

Figure 3: Four-Quarter Moving Average of Quarterly Net Migration to and from Urban Neighborhoods, Urban Populations of 1.4 Million to 645,000



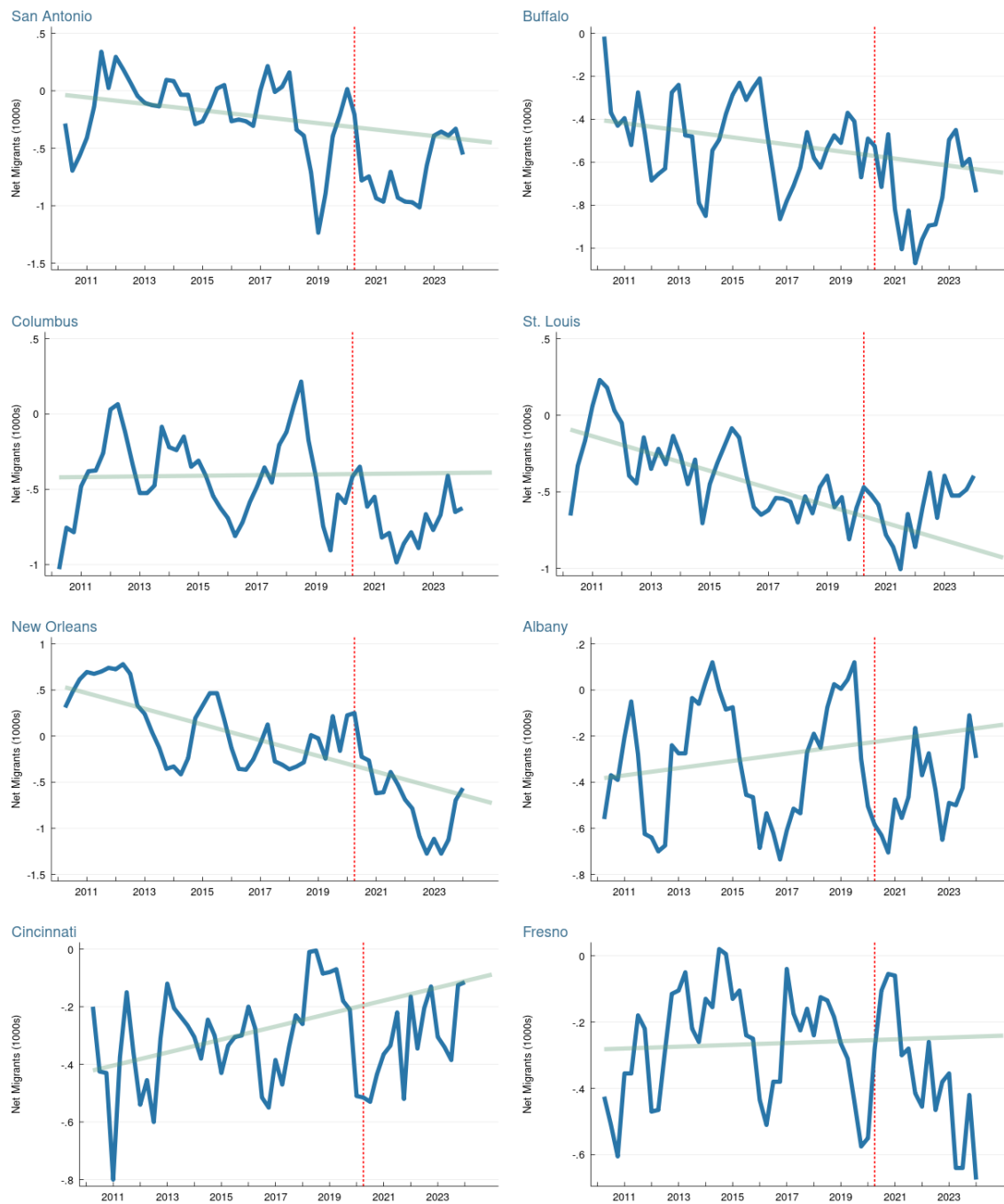
The red vertical line indicates the beginning of the pandemic. The green line is the pre-pandemic (2010:Q1 to 2019:Q4) trend. Sources: Federal Reserve Bank of New York/Equifax Consumer Credit Panel, US Census Bureau, and author's calculations.

Figure 4: Four-Quarter Moving Average of Quarterly Net Migration to and from Urban Neighborhoods, Urban Populations of 628,000 to 393,000



The red vertical line indicates the beginning of the pandemic. The green line is the pre-pandemic (2010:Q1 to 2019:Q4) trend. Sources: Federal Reserve Bank of New York/Equifax Consumer Credit Panel, US Census Bureau, and author's calculations.

Figure 5: Four-Quarter Moving Average of Quarterly Net Migration to and from Urban Neighborhoods, Urban Populations of 343,000 to 254,000



The red vertical line indicates the beginning of the pandemic. The green line is the pre-pandemic (2010:Q1 to 2019:Q4) trend. Sources: Federal Reserve Bank of New York/Equifax Consumer Credit Panel, US Census Bureau, and author's calculations.

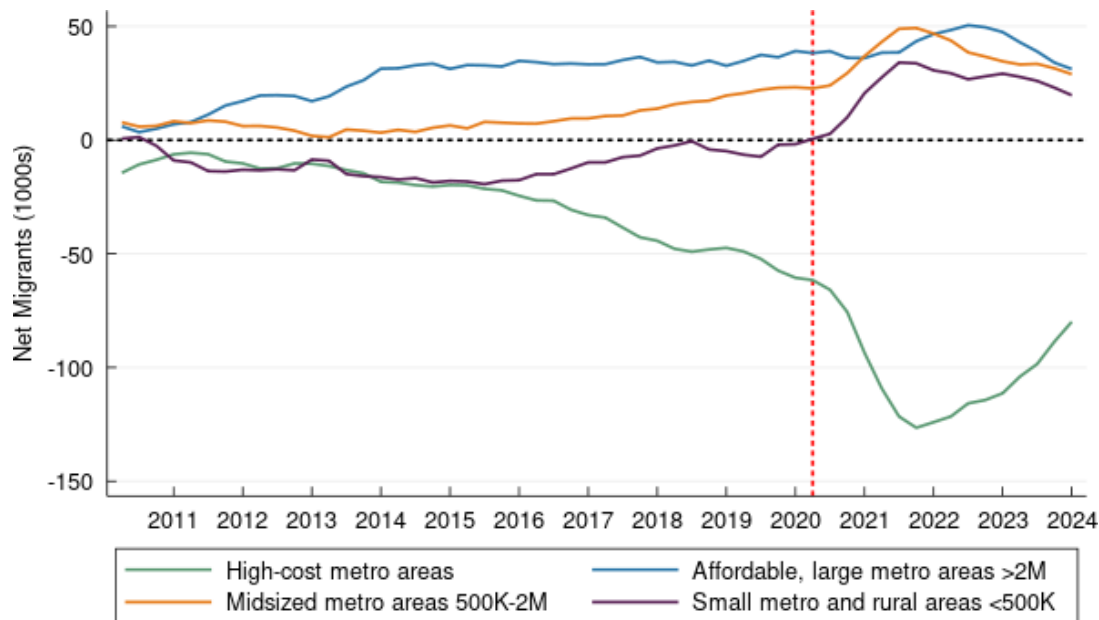
Figure 6: Four-Quarter Moving Average of Quarterly Net Migration to and from Urban Neighborhoods, Atlanta (Urban Population of 251,000)



The red vertical line indicates the beginning of the pandemic. The green line is the prepandemic (2010:Q1 to 2019:Q4) trend. Sources: Federal Reserve Bank of New York/Equifax Consumer Credit Panel, US Census Bureau, and author's calculations.

Net Regional Migration

Figure 7: Four-Quarter Moving Average of Quarterly Net Migration to and from Four Types of Regions



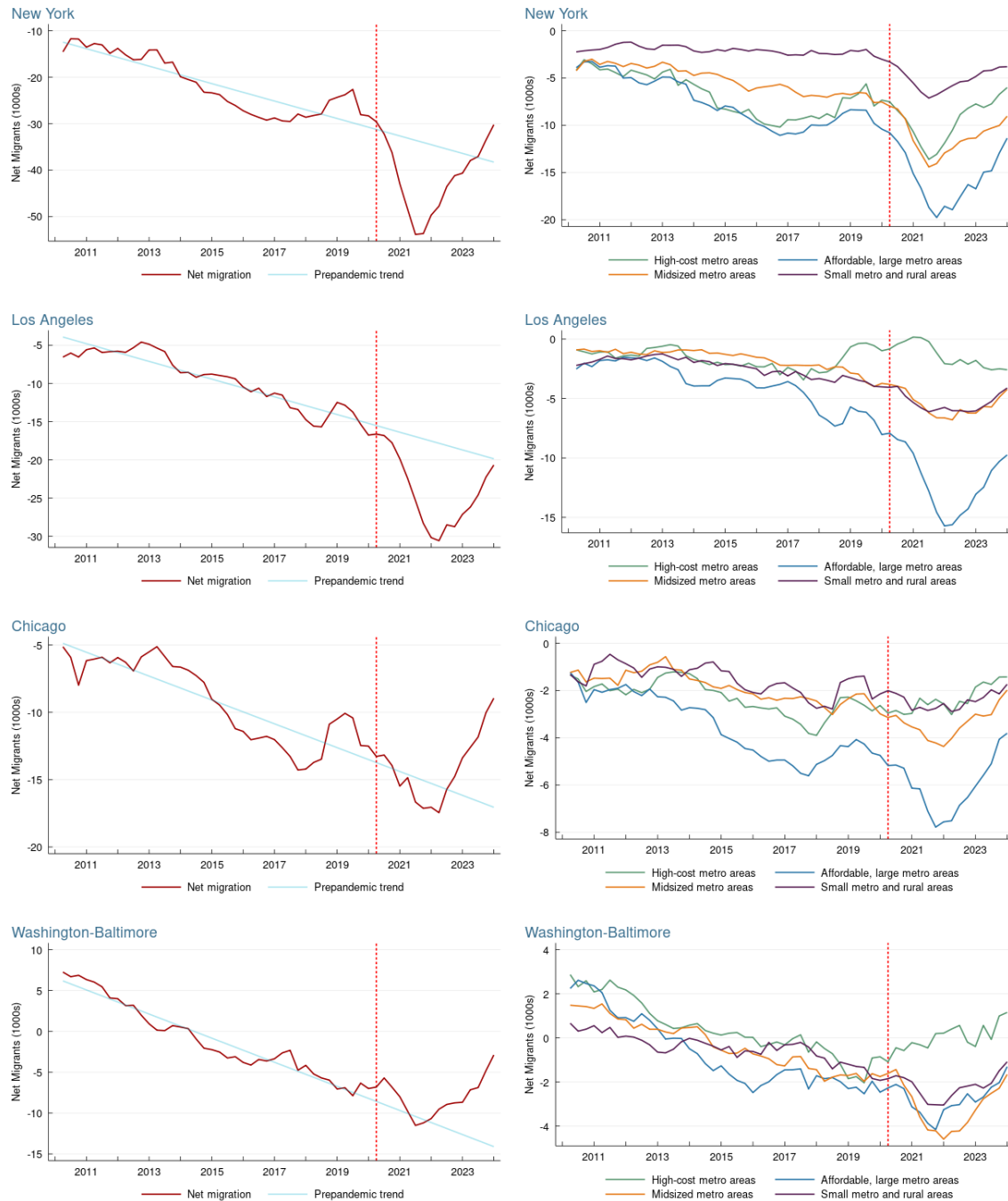
The red vertical line indicates the beginning of the pandemic. Sources: Federal Reserve Bank of New York/Equifax Consumer Credit Panel, US Census Bureau, and author's calculations.

Recent trends in migration between regions

- Before the pandemic, 16 of the 36 metro areas had negative net migration in most years. In most cases, net migration from these places is similar to or slower than it was before the pandemic. In the Q4:2023 estimates, 9 of these 16 displayed continued improvement in their net migration. Examples of this pattern include New York, Chicago, Washington–Baltimore (Figure 8), Philadelphia (Figure 9), Pittsburgh (Figure 13), and Milwaukee (Figure 16).
- Twenty of the 36 metros had generally positive net migration in the prepandemic years. Fifteen of the 20 metros have had postpandemic net migration that was either contributing less to their growth or has turned negative. In the Q4:2023 estimates, net migration was little changed in six of the 15 metros. The Q4:2023 net migration estimates became more unfavorable in another six of these set-back places: Phoenix (Figure 11), Orlando, Portland (Figure 12), Tampa, Charlotte (Figure 13), and Austin (Figure 16).

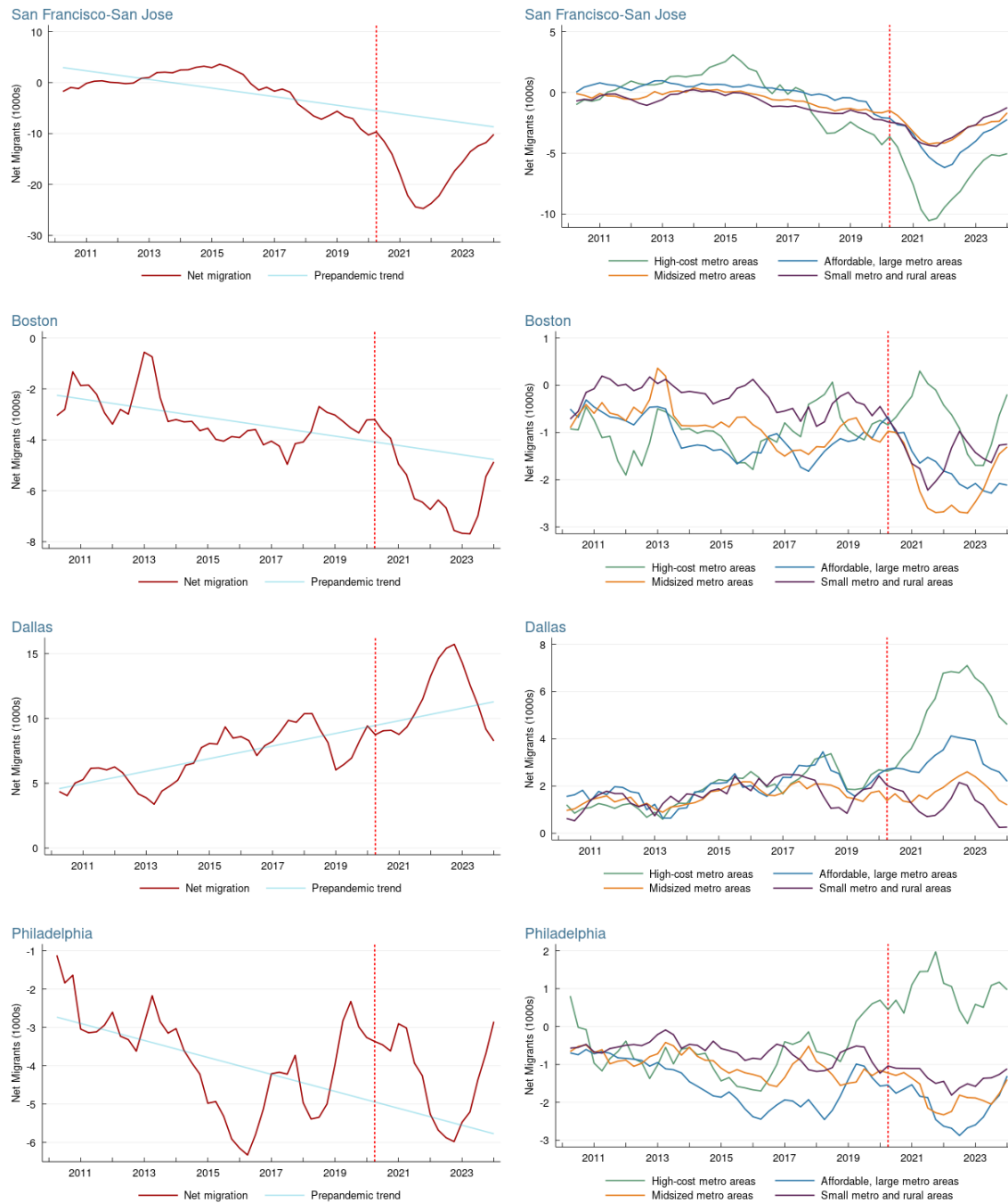
Figures 8 to 16 below present metro areas in descending order of their total populations.

Figure 8: Four-Quarter Moving Average of Quarterly Net Migration to and from All Other Regions (left) and Four Types of Regions (right), Metro Areas with Total Populations of 23.5 Million to 9.7 Million



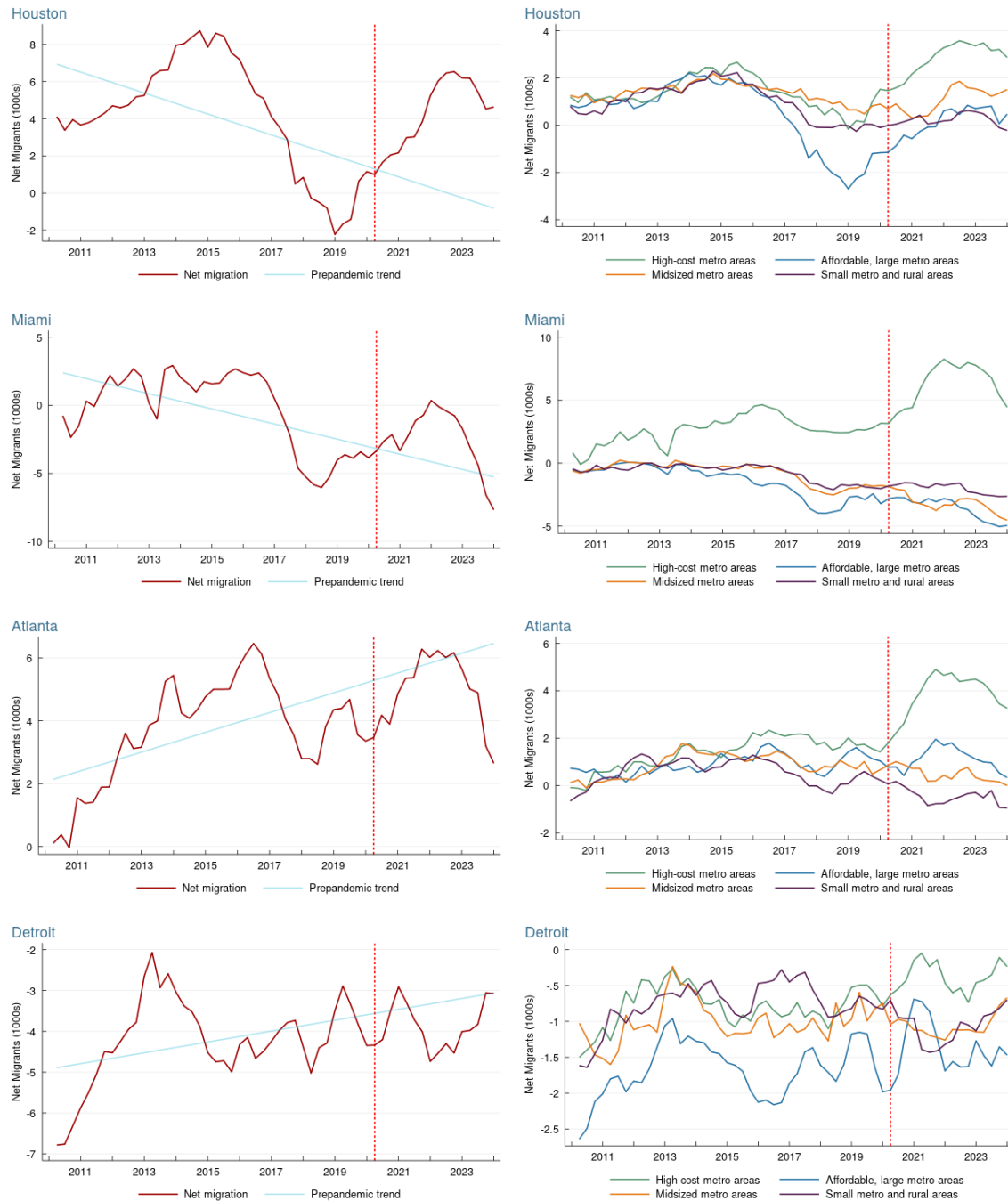
The red vertical line indicates the beginning of the pandemic. Sources: Federal Reserve Bank of New York/Equifax Consumer Credit Panel, US Census Bureau, and author's calculations.

Figure 9: Four-Quarter Moving Average of Quarterly Net Migration to and from All Other Regions (left) and Four Types of Regions (right), Metro Areas with Total Populations of 8.8 Million to 7.2 Million



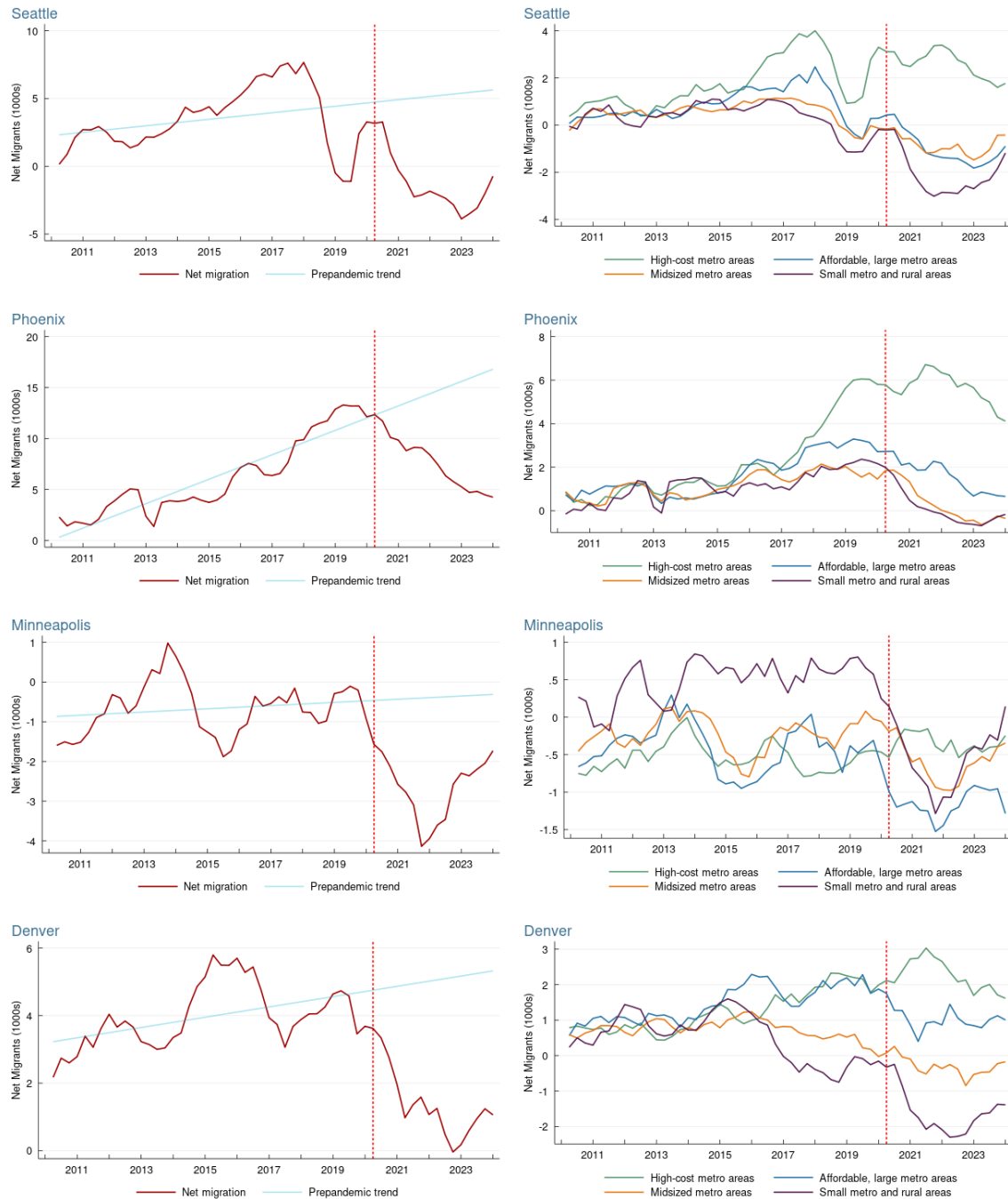
The red vertical line indicates the beginning of the pandemic. Sources: Federal Reserve Bank of New York/Equifax Consumer Credit Panel, US Census Bureau, and author's calculations.

Figure 10: Four-Quarter Moving Average of Quarterly Net Migration to and from All Other Regions (left) and Four Types of Regions (right), Metro Areas with Total Populations of 7.1 Million to 5.3 Million



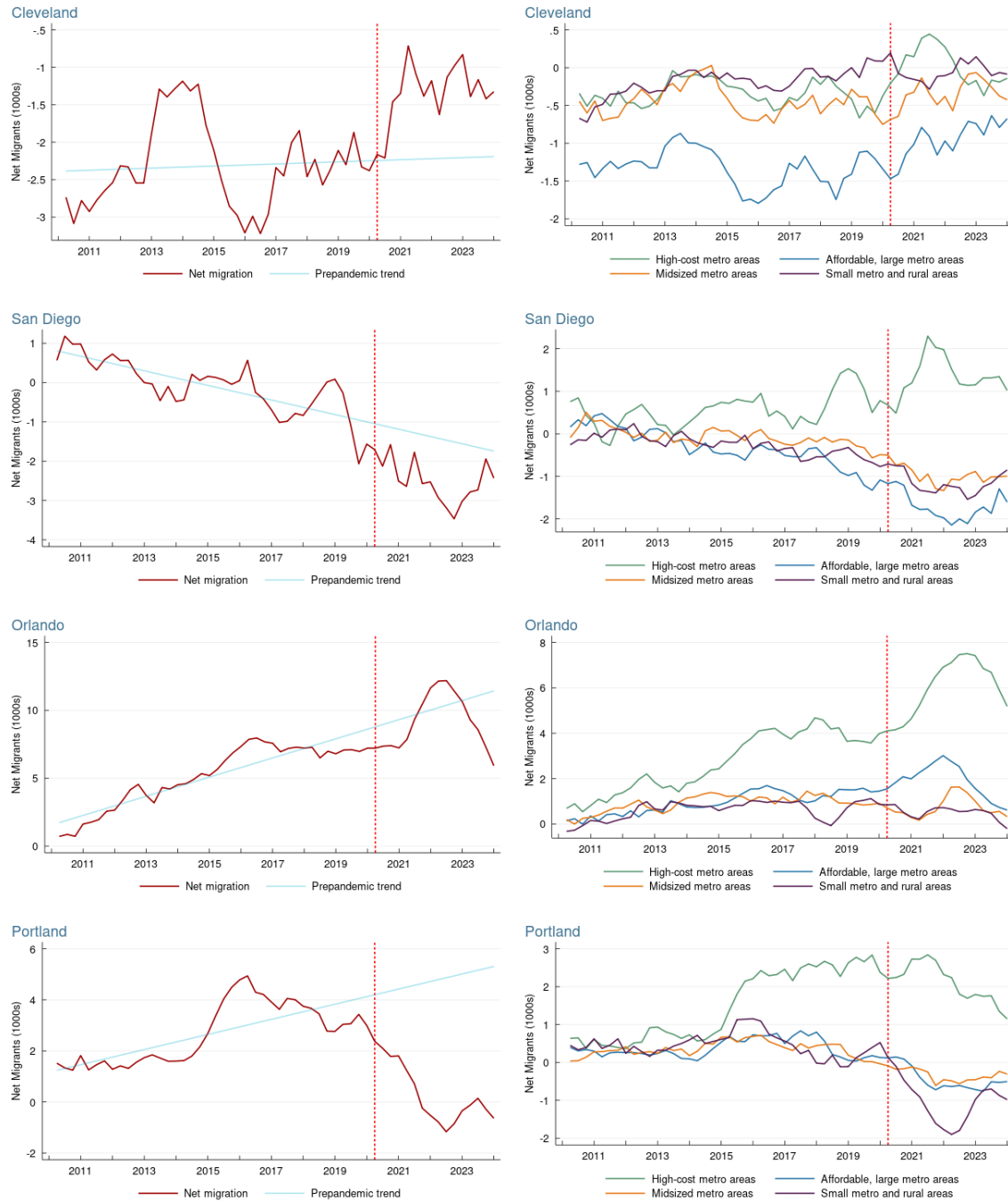
The red vertical line indicates the beginning of the pandemic. Sources: Federal Reserve Bank of New York/Equifax Consumer Credit Panel, US Census Bureau, and author's calculations.

Figure 11: Four-Quarter Moving Average of Quarterly Net Migration to and from All Other Regions (left) and Four Types of Regions (right), Metro Areas with Total Populations of 4.8 Million to 3.5 Million



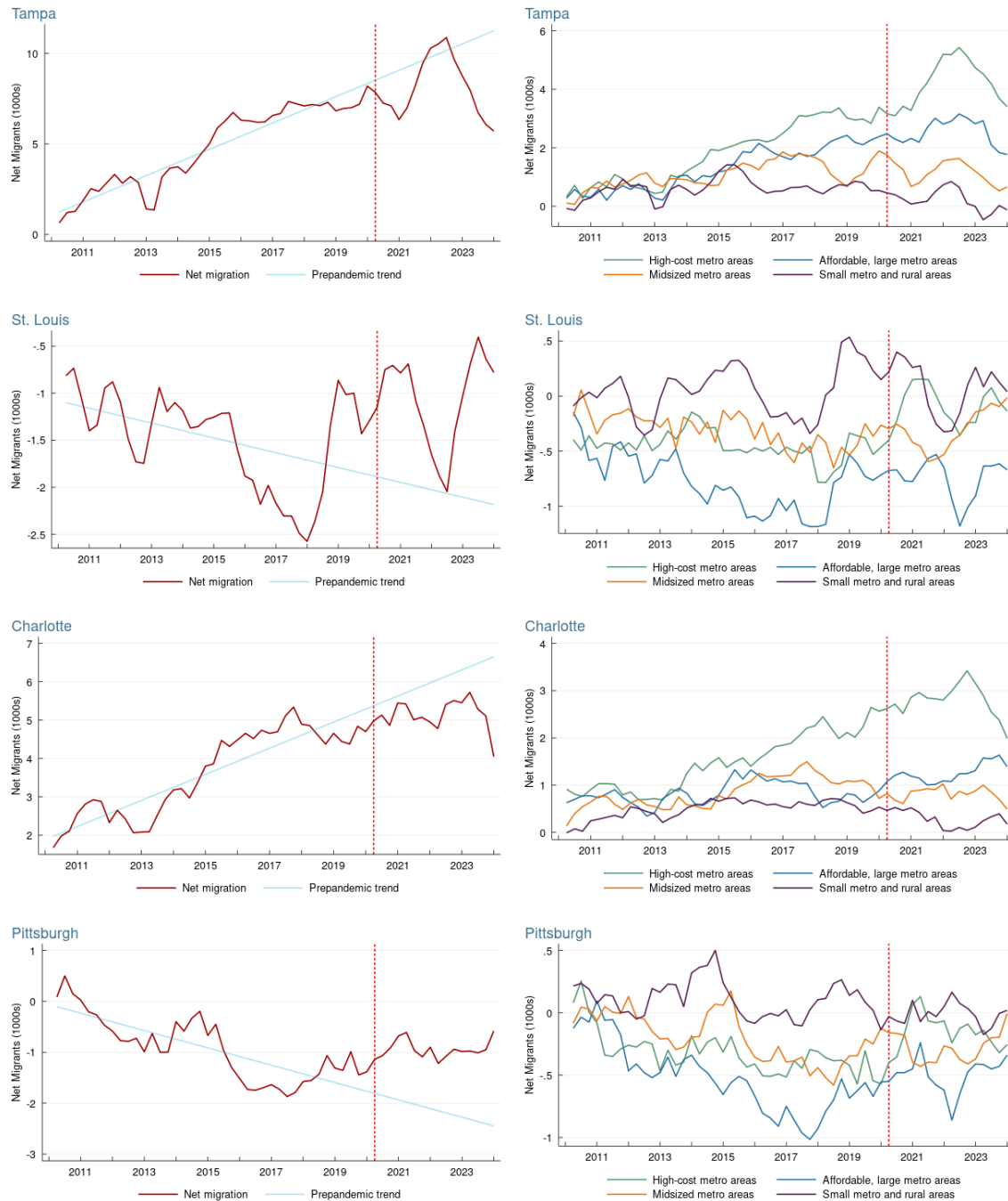
The red vertical line indicates the beginning of the pandemic. Sources: Federal Reserve Bank of New York/Equifax Consumer Credit Panel, US Census Bureau, and author's calculations.

Figure 12: Four-Quarter Moving Average of Quarterly Net Migration to and from All Other Regions (left) and Four Types of Regions (right), Metro Areas with Total Populations of 3.5 Million to 3.2 Million



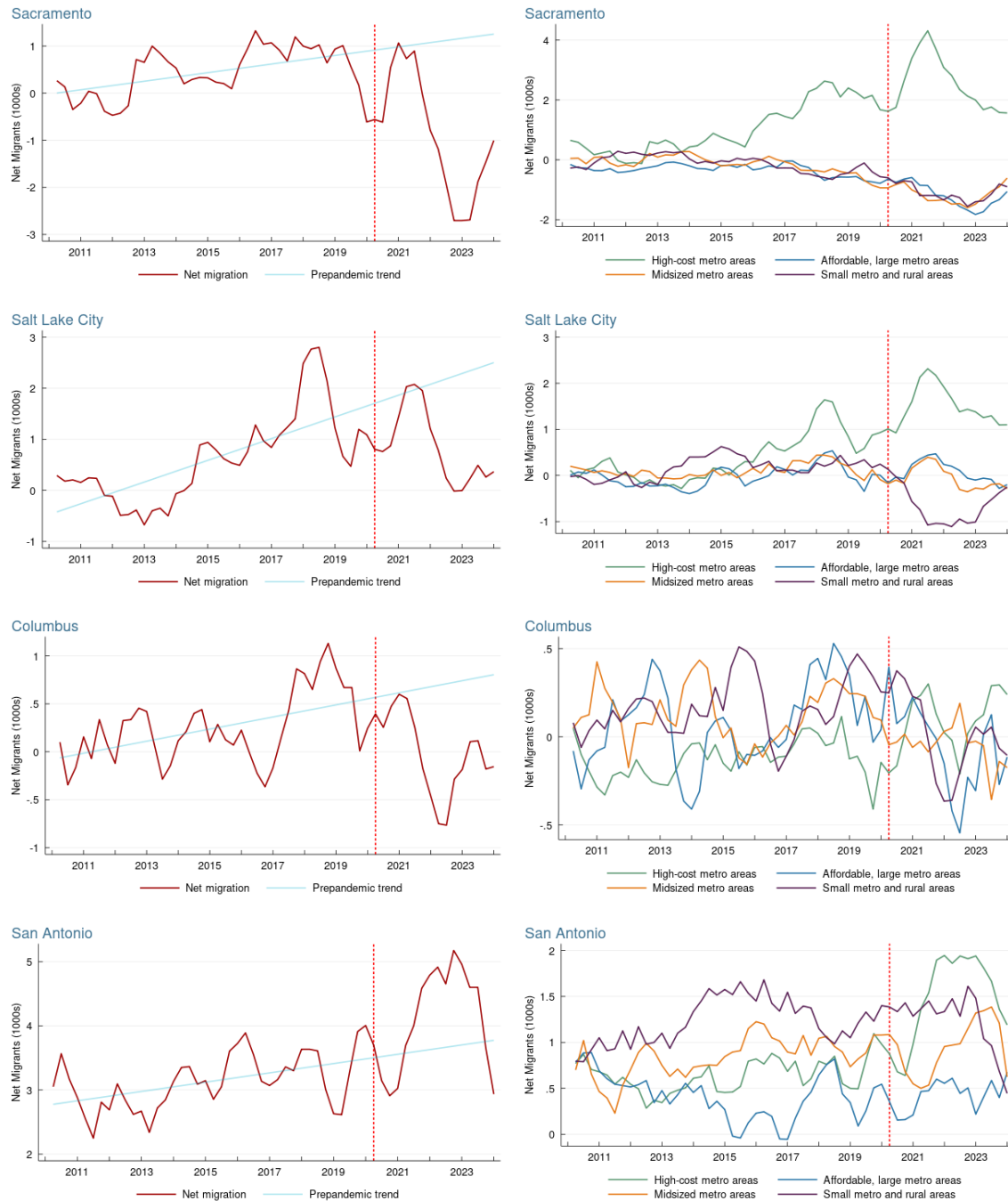
The red vertical line indicates the beginning of the pandemic. Sources: Federal Reserve Bank of New York/Equifax Consumer Credit Panel, US Census Bureau, and author's calculations.

Figure 13: Four-Quarter Moving Average of Quarterly Net Migration to and from All Other Regions (left) and Four Types of Regions (right), Metro Areas with Total Populations of 3.1 Million to 2.6 Million



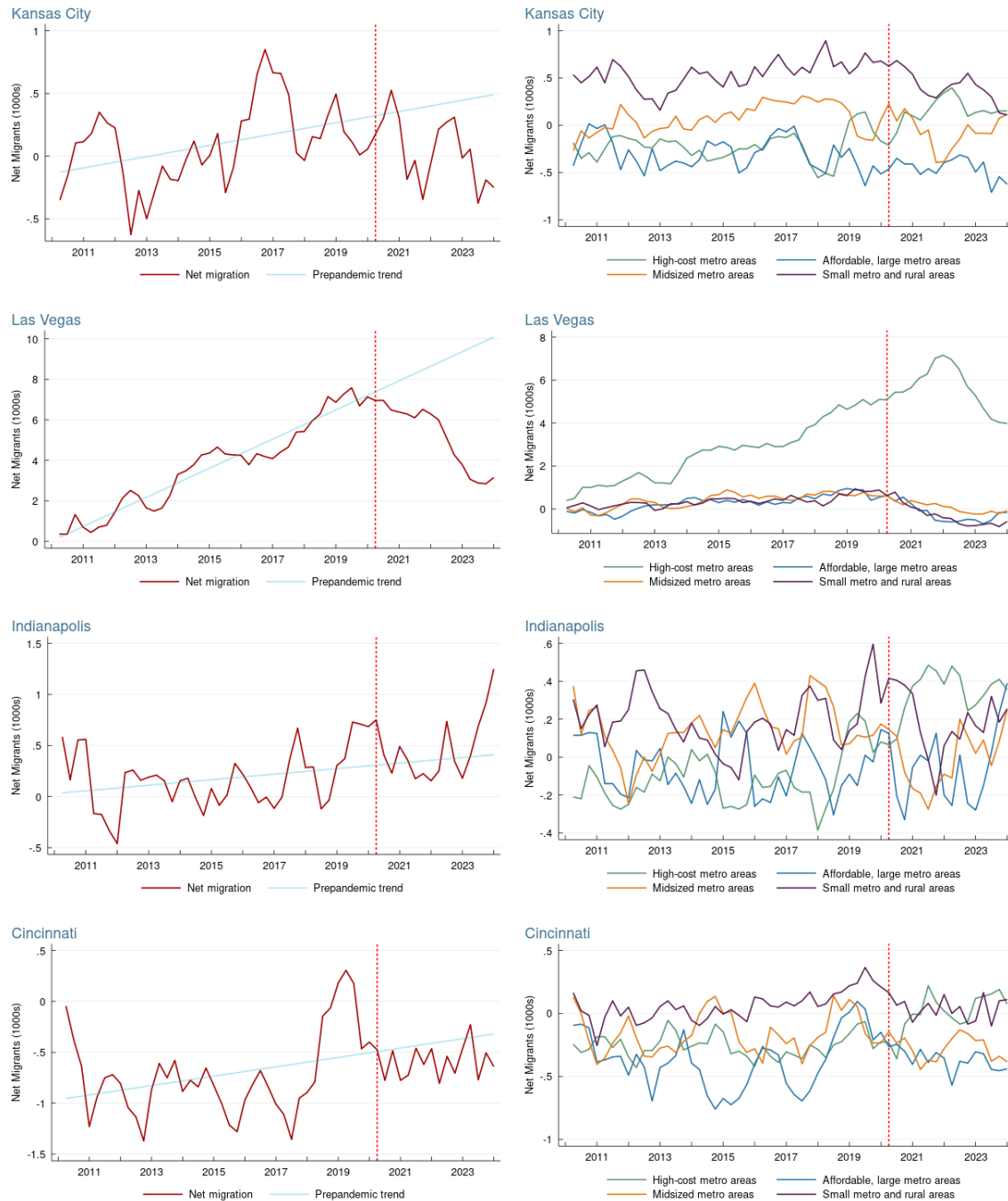
The red vertical line indicates the beginning of the pandemic. Sources: Federal Reserve Bank of New York/Equifax Consumer Credit Panel, US Census Bureau, and author's calculations.

Figure 14: Four-Quarter Moving Average of Quarterly Net Migration to and from All Other Regions (left) and Four Types of Regions (right), Metro Areas with Total Populations of 2.6 Million to 2.5 Million



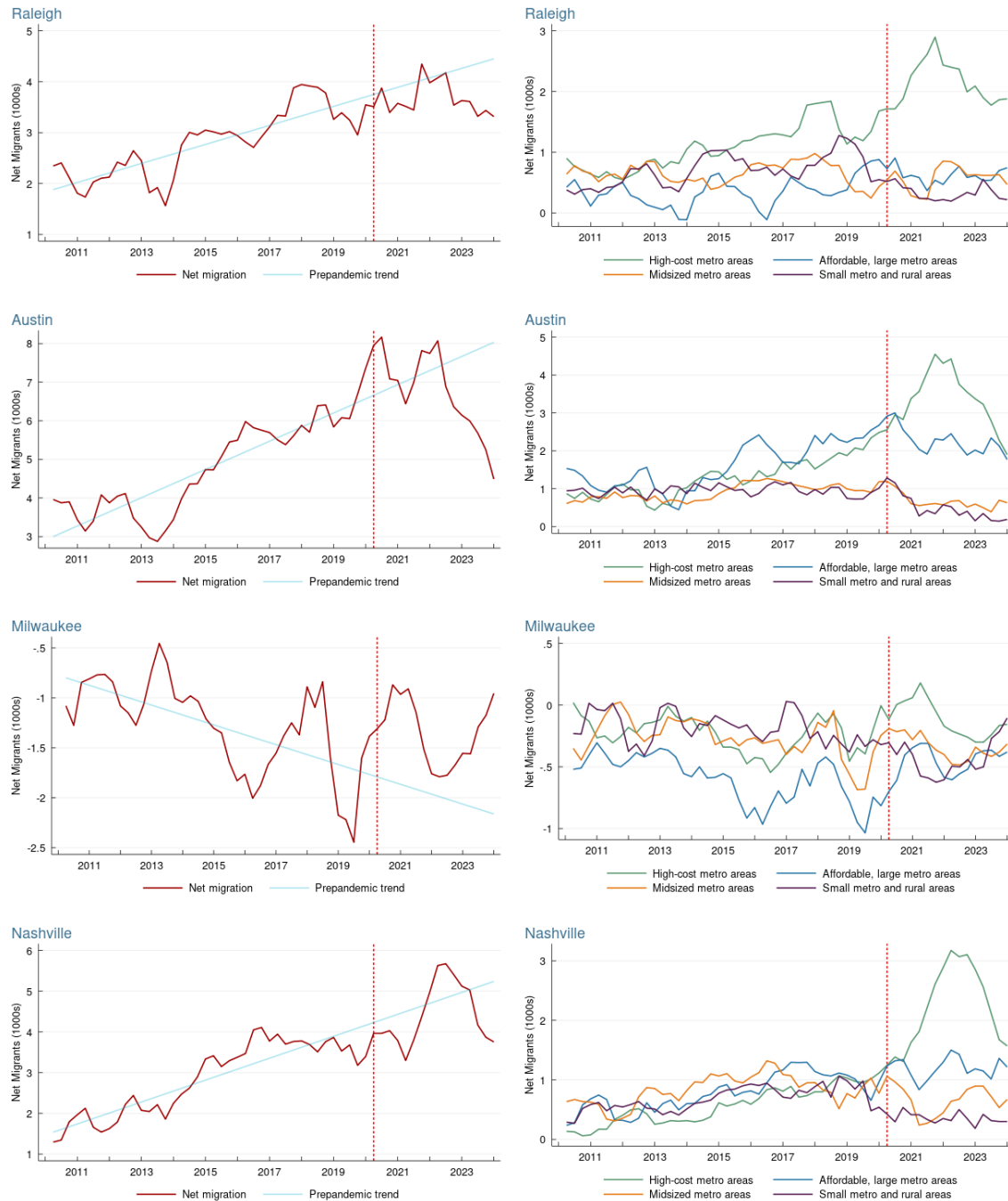
The red vertical line indicates the beginning of the pandemic. Sources: Federal Reserve Bank of New York/Equifax Consumer Credit Panel, US Census Bureau, and author's calculations.

Figure 15: Four-Quarter Moving Average of Quarterly Net Migration to and from All Other Regions (left) and Four Types of Regions (right), Metro Areas with Total Populations of 2.5 Million to 2.2 Million



The red vertical line indicates the beginning of the pandemic. Sources: Federal Reserve Bank of New York/Equifax Consumer Credit Panel, US Census Bureau, and author's calculations.

Figure 16: Four-Quarter Moving Average of Quarterly Net Migration to and from All Other Regions (left) and Four Types of Regions (right), Metro Areas with Total Populations of 2.2 Million to 2 Million



The red vertical line indicates the beginning of the pandemic. Sources: Federal Reserve Bank of New York/Equifax Consumer Credit Panel, US Census Bureau, and author's calculations.

References

- DeWaard, Jack, Janna Johnson, and Stephan D. Whitaker. 2019. “Internal Migration in the United States: A Comprehensive Comparative Assessment of the Consumer Credit Panel.” *Demographic Research* 41 (October): 953–1006. <https://doi.org/10.4054/DemRes.2019.41.33>.
- Lee, Donghoon, and Wilbert Van der Klaauw. 2010. “An Introduction to the FRBNY Consumer Credit Panel.” Staff Report 479. Federal Reserve Bank of New York. <https://fedinprint.org/item/fednsr/12522>.

Appendix

Graph values

Tables A1 and A2 contain the migration estimates that appear in each of the figures in this update. For the urban neighborhood estimates to be included in the figures and tables, the metro area had to have at least 250,000 people living in its urban neighborhoods in 2019. The metros above this threshold represent 90 percent of urban residents in the United States. Table A2 contains the net migration between the combined statistical areas with populations above 2 million and the four types of regions: high-cost metros (HC), affordable, large metros (AL), mid-sized metros, with populations of 500,000 to 2 million (MS), small metro areas, with populations below 500,000, and rural areas (SR). As in the figures, all values are four-quarter moving averages. The units are thousands of migrants.

Table A1. Four-Quarter Moving Averages of Net Migration for Urban Neighborhoods of the Indicated Metro Areas (Combined Statistical Areas), Thousands of Migrants per Quarter

Table A2. Combined Statistical Areas' Four-Quarter Moving Average of Net Migration for Other Regions by Type, Thousands of Migrants per Quarter

Data sources

The migration estimates in this update are created with data from the Federal Reserve Bank of New York/Equifax Consumer Credit Panel (CCP). The CCP is a 5 percent random sample of the credit histories maintained by Equifax. The CCP reports the census block of residence for over 10 million individuals each quarter. Each month, Equifax receives individuals' addresses, along with reports of debt balances and payments, from creditors (mortgage lenders, credit card issuers, student loan servicers, etc.). An algorithm maintained by Equifax considers all of the addresses reported for an individual and identifies the individual's most likely current address. Equifax anonymizes the data before they are added to the CCP, removing names, addresses, and Social Security numbers (SSNs). In lieu of mailing addresses, the census block of the address is added to the CCP. Equifax creates a unique, anonymous identifier to enable researchers to build individuals' panels. The panel nature of the data allows us to observe when someone has migrated and is living in a census block different from the one they lived in at the end of the preceding quarter. For more details about the CCP and its use in measuring migration, see [Lee and Van der Klaauw \(2010\)](#) and [DeWaard, Johnson, and Whitaker \(2019\)](#).

American Community Survey data are used to designate census tracts as urban or non-urban. Listing data from the National Association of Realtors are used to designate the high-cost metro areas.

Definitions

Metropolitan area

The metropolitan areas in this report are combined statistical areas. This is the most aggregate definition of metro areas, and it combines Washington DC with Baltimore, San Jose with San Francisco, Akron with Cleveland, etc. Metro areas are combinations of counties that are tightly linked by worker commutes and other economic activity. All counties outside of metropolitan areas are tracked as parts of a rural commuting zone (CZ). CZs are also groups of counties linked by commuting, but CZ definitions cover all counties, both metropolitan and non-metropolitan.

High-cost metropolitan area

High-cost metro areas are those where the median list price for a house was more than \$200 per square foot on average between April 2017 and April 2022. These areas include San Francisco–San Jose, New York, San Diego, Los Angeles, Seattle, Boston, Miami, Sacramento, Denver, Salt Lake City, Portland, and Washington–Baltimore. All other metro areas with populations above 2 million are categorized as affordable, large metros.

Urban neighborhood

For the analysis of urban neighborhoods, census tracts are designated as urban if they have a population density above 7,000 people per square mile. High-density neighborhoods can support walkable retail districts and high-frequency public transportation. They are more likely to have the “street life” that people associate with living in an urban rather than a suburban area. The threshold of 7,000 people per square mile was selected because it was the average density in the largest US cities in the 1930 census. Before World War II, workplaces, shopping, schools, and parks had to be accessible on foot.

Tracts are also designated as urban if more than half of their housing units were built before WWII and they have a population density above 2,000 people per square mile. The lower population density threshold for the pre-war neighborhoods recognizes that many urban tracts have lost population since the 1960s. While the street grids usually remain, the area also needs sufficient density to support neighborhood establishments and continue to function as an urban neighborhood.

Small cities and towns often have a few dense and walkable neighborhoods, but these tracts are not given an urban designation unless their metro area has at least 500,000 residents. Another defining characteristic of an urban neighborhood is that it places its residents close to amenities that can only be supported by the scale of a major metro, such as major league sports stadiums, professional theaters, museums, etc.

Urban migration

To obtain net urban migration estimates, we count the number of people moving into the urban neighborhoods of the indicated metros and subtract the number of people moving out of the same urban neighborhoods. Negative values

mean more people are leaving than arriving. The out-migration counts include people moving from the urban neighborhoods to suburbs in the same metro area or to any region outside the metro area. Similarly, the in-migration counts include people arriving in the urban neighborhoods from suburbs in the same metro area or any region outside the metro area. Local urban-to-urban moves are not included.

Regional migration

The regional migration estimates count the people who move between different metro areas or between metro areas and rural CZs. Local within-metro movers are not included. The estimates of regional moves include everyone who moves to another region, making no distinction between urban and suburban neighborhoods.