

Did the COVID-19 Pandemic Cause an Urban Exodus? Fourth Quarter 2021 Update for Tables and Figures

By Stephan Whitaker, Federal Reserve Bank of Cleveland April 11, 2022

This document contains tables and figures from "Did the COVID-19 Pandemic Cause an Urban Exodus?" and "Did the COVID-19 Pandemic Cause an Urban Exodus? Follow-Up Questions and Answers" that have been updated with data through December 31, 2021.

This update is substantially different from previous updates. The measures in the original data brief were designed to characterize the immediate impact of the pandemic and lockdowns. The duration of the pandemic has grown quite long and has exhibited enough variation that measures aggregating over the whole pandemic period are not as useful. To provide a more accurate sense of recent developments on an ongoing basis, the tables now report migration in the most recent four quarters, rather than the whole pandemic era. Where percentage changes are reported in tables, they are the increase or decrease of the most recent four quarters relative to the comparable averages from the three years just before the pandemic (2017:Q2 through 2020:Q1). This update continues to display the time series figures, so the recent estimates can be compared to the series' history.

In the fourth quarter of 2021, the estimated net migration out of urban neighborhoods declined to 43,500 people per month (see Figure 1). As shown in Figure 2, the four-quarter moving average of gross outflows decreased by 3,900 people, while the moving average of gross inflows increased by 3,100 people. A majority (32 of 54) of the largest metro areas (Figures A4 to A54), including the high-cost metros of New York (Figure A32), San Francisco (Figure A49), San Jose (Figure A50), and Washington DC (Figure A54), displayed the pattern of both decreasing outflows and increasing inflows during 2021:Q4. Several lower-cost markets, including Cleveland (Figure A13), Columbus (Figure A14), Milwaukee (Figure A28), Pittsburgh (Figure A37), and St. Louis (Figure A45), had continued increases in net out-migration from their urban neighborhoods.

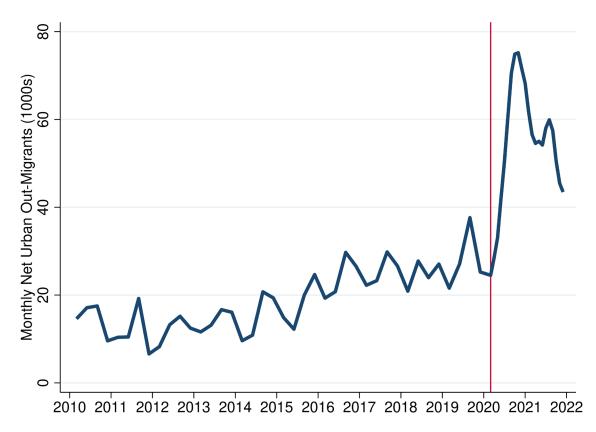


Figure 1. Estimated Net Out-Migration from Urban Neighborhoods

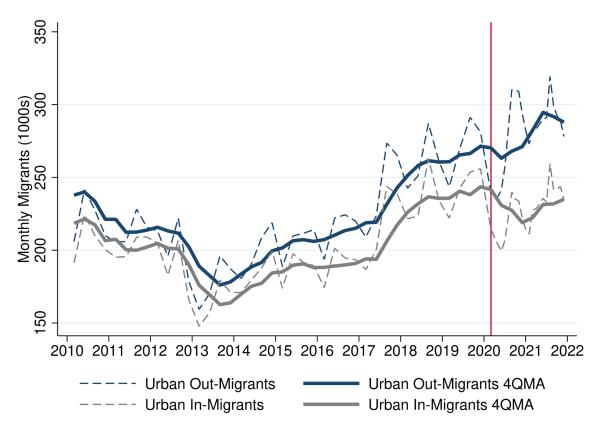


Figure 2. Estimated Gross Migration into and from Urban Neighborhoods

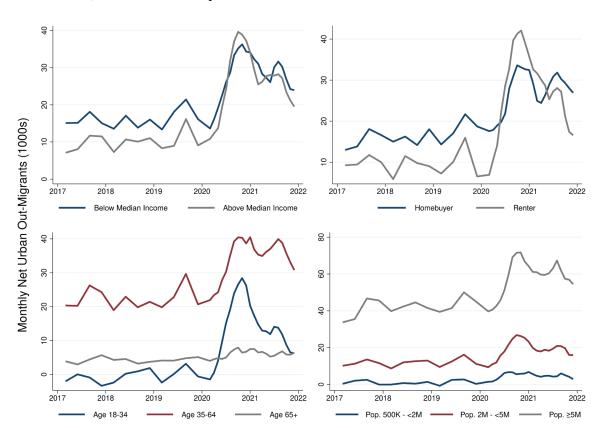


Figure 3. Estimated Net Migration from Urban Neighborhoods by Neighborhood Income, Migrant Characteristics, and Metro Area Population

Follow-Up Table 1. Estimated Number of Migrants Leaving Urban Neighborhoods of Metro Areas by Type of Destination from 2021:Q1 through 2021:Q4.

|                    | To suburl                        | h of the | To high-c                             | net large | To lowe  |         | To midsiz                         | ed metro | areas (<                  |         |
|--------------------|----------------------------------|----------|---------------------------------------|-----------|----------|---------|-----------------------------------|----------|---------------------------|---------|
|                    | To suburb of the same metro area |          | To high-cost, large metro areas (>2M) |           | (>2)     |         | To midsized metro areas (500K–2M) |          | towns, and rural<br>areas |         |
|                    | same met                         | Percent  | metro are                             | Percent   | (* 2)    | Percent | areas (50                         | Percent  | ar                        | Percent |
|                    | Migrants                         | change   | Migrants                              | change    | Migrants |         | Migrants                          | change   | Migrants                  | change  |
| New York, NY       | 222,760                          | 14.9     | 88,620                                | 12.4      | 98,300   | 31.7    |                                   | 31.7     |                           | 32.2    |
| Los Angeles, CA    | 176,460                          | -0.5     | 124,980                               | 12.4      | 57,940   | 33.9    |                                   | 27.3     |                           | 14.9    |
| Chicago, IL        | 116,260                          | 11.5     | 24,420                                | 2.4       | 27,640   | 19.5    |                                   | 15.2     |                           | 17.5    |
| Miami, FL          | 123,880                          | 5.4      | 16,160                                | -0.2      | 23,160   | 13.0    |                                   | 25.9     |                           | 13.5    |
| San Francisco, CA  | 61,960                           | 9.4      | 63,420                                | 22.4      | 16,540   | 37.5    |                                   | 25.6     |                           | 38.6    |
| Washington, DC     | 93,340                           | 0.4      | 19,960                                | -11.0     | 26,340   | 13.5    |                                   | 10.2     |                           | 13.2    |
| Boston, MA         | 65,620                           | 3.1      | 23,500                                | 6.6       | 11,340   | 6.9     |                                   | 29.9     |                           | 25.0    |
| Philadelphia, PA   | 65,700                           | 13.5     | 16,780                                | 8.4       | 9,800    | 30.0    | ,                                 | 26.1     |                           | 14.1    |
| San Diego, CA      | 57,580                           | -1.9     | 23,260                                | 4.0       | 10,640   | 13.8    |                                   | 13.4     |                           | 9.6     |
| Houston, TX        | 73,260                           | 8.3      | 4,680                                 | -12.8     | 7,400    | -4.8    |                                   | -0.2     |                           | 0.2     |
| San Jose, CA       | 31,620                           | 9.1      | 35,860                                | 9.2       | 8,260    | 38.6    |                                   | 26.7     |                           | 12.1    |
| Dallas, TX         | 69,200                           | 2.8      | 5,320                                 | -1.5      | 6,640    | 0.1     | 3,860                             | -4.5     |                           | 3.7     |
| Seattle, WA        | 51,760                           | 2.7      | 12,640                                | 8.7       | 7,100    | 25.7    | 4,780                             | 5.1      |                           | 17.2    |
| Riverside, CA      | 43,340                           | 0.0      | 17,940                                | 11.1      | 5,200    | 35.2    | 2,900                             | 21.8     |                           | 27.9    |
| Las Vegas, NV      | 46,160                           | 4.4      | 10,760                                | 18.4      | 6,220    | 51.7    | 4,760                             | 4.1      |                           | 23.8    |
| Denver, CO         | 45,760                           | 3.2      | 5,920                                 | 10.4      | 6,540    | 17.3    | 6,360                             | 25.9     |                           | 17.8    |
| Phoenix, AZ        | 48,880                           | 14.5     | 4,220                                 | 4.3       | 3,160    | 33.1    | 3,620                             | 37.1     |                           | 9.4     |
| Baltimore, MD      | 32,660                           | 0.6      | 9,040                                 | -7.9      | 4,460    | 6.2     | 3,760                             | 13.3     |                           | 14.6    |
| Minneapolis, MN    | 34,360                           | 7.5      | 4,140                                 | -3.9      | 2,560    | 5.2     |                                   | 21.2     |                           | 13.2    |
| Sacramento, CA     | 29,980                           | 2.0      | 6,300                                 | 2.2       | 2,220    | 22.4    | 2,820                             | 1.2      |                           | 20.8    |
| Portland, OR       | 27,940                           | 0.0      | 5,680                                 | 8.5       | 2,940    | 31.6    |                                   | 19.6     | ,                         | 19.0    |
| Cleveland, OH      | 25,320                           | 8.6      | 2,560                                 | 3.2       | 3,800    | 21.8    | 3,880                             | 14.8     |                           | -7.9    |
| Detroit, MI        | 28,440                           | 3.4      | 2,140                                 | 36.0      | 2,580    | 21.3    | 2,040                             | 10.1     |                           | -4.1    |
| Pittsburgh, PA     | 22,320                           | -0.8     | 4,580                                 | 11.7      | 3,620    | 10.4    |                                   | 6.4      |                           | 25.3    |
| Providence, RI     | 19,060                           | -6.4     | 6,940                                 | 14.1      | 2,480    | 31.0    | 3,260                             | 5.4      |                           | 39.3    |
| Atlanta, GA        | 22,000                           | 6.7      | 3,040                                 | 7.3       | 1,820    | 4.6     |                                   | 2.4      | ,                         | 12.1    |
| Milwaukee, WI      | 20,000                           | 13.1     | 3,060                                 | 3.4       | 2,940    | 7.0     |                                   | 2.7      |                           | 5.3     |
| Urban Honolulu, HI | 14,500                           | 1.4      | 5,680                                 | -6.8      | 3,960    | 16.5    |                                   | 14.6     |                           | 7.8     |
| St. Louis, MO      | 17,820                           | 1.8      | 2,340                                 | -4.1      | 2,320    | 17.6    |                                   | 23.3     |                           | 16.3    |
| Virginia Beach, VA | 16,260                           | 4.3      | 2,980                                 | 9.6       | 2,160    | 6.9     |                                   | -4.8     |                           | -1.1    |
| Columbus, OH       | 17,840                           | 5.5      | 1,760                                 | -2.9      | 2,120    | -10.4   |                                   | 13.4     |                           | -5.7    |
| Salt Lake City, UT | 14,900                           | 7.5      | 2,320                                 | 7.1       | 1,460    | 25.9    |                                   | -3.1     |                           | 19.1    |
| San Antonio, TX    | 18,220                           | 8.6      | 680                                   | -17.7     | 1,800    | -2.2    |                                   | 8.9      |                           | -6.6    |
| Bridgeport, CT     | 9,880                            | -2.0     | 5,160                                 | 13.3      | 1,720    | 27.1    | 4,680                             | 20.6     | 1,420                     | 23.1    |
| Tampa, FL          | 15,180                           | 5.0      | 1,620                                 | 6.1       | 1,460    | 4.3     | 2,160                             | 39.1     | 1,680                     | 31.3    |
| New Orleans, LA    | 12,980                           | 7.1      | 2,060                                 | -1.3      | 2,940    | 25.6    |                                   | 17.6     | 2,780                     | 8.3     |
| Cincinnati, OH     | 14,620                           | 0.3      | 1,580                                 | 7.2       | 1,980    | 12.9    |                                   | 16.2     | 1,400                     | 2.4     |
| Buffalo, NY        | 12,800                           | 7.9      | 2,240                                 | 4.7       | 1,600    | -7.0    |                                   | 8.9      |                           | 73.4    |
| Albany, NY         | 11,280                           | 17.9     |                                       | -8.6      | 1,080    | 25.6    | 1,340                             | 9.8      |                           | 17.7    |
| Austin, TX         | 11,380                           | 4.5      | 1,060                                 | 1.3       |          | 9.1     | 700                               | 26.5     |                           | 23.2    |
| Hartford, CT       | 10,320                           | 8.3      | 1,200                                 | -28.6     |          | 4.1     | 2,460                             | 18.6     |                           | -19.3   |
| Stockton, CA       | 7,700                            | -7.3     | 4,140                                 | 17.2      |          | 23.0    |                                   | 31.3     |                           | 35.5    |
| New Haven, CT      | 7,760                            | 5.8      | 1,960                                 | -20.8     |          | 37.6    |                                   | 21.4     |                           | 14.2    |
| Oxnard, CA         | 8,240                            | -2.1     | 3,460                                 | -0.6      |          | 5.7     |                                   | -4.5     |                           | 4.2     |
| Worcester, MA      | 8,360                            | -2.1     | 2,600                                 | 24.6      |          | 12.9    |                                   | 17.4     |                           | 51.2    |

Follow-Up Table 1. Estimated Number of Migrants Leaving Urban Neighborhoods of Metro Areas by Type of Destination from 2021:Q1 through 2021:Q4.

|                  | To suburb of the same metro area |         | To high-cost, large<br>metro areas (>2M) |         | To lower-cost,<br>large metro areas<br>(>2M) |         | To midsized metro<br>areas (500K–2M) |         | areas    |         |
|------------------|----------------------------------|---------|--|---------|--|---------|--------------------------------------|---------|----------|---------|
|                  |                                  |         |  |         |  |         |                                      |         |          |         |
|                  |                                  | Percent |  | Percent |  | Percent |                                      | Percent |          | Percent |
|                  | Migrants                         | change  | Migrants                                 | change  | Migrants                                     | change  | Migrants                             | change  | Migrants | change  |
| Allentown, PA    | 8,520                            | 16.0    | 2,000                                    | 22.4    | 1,360  | -5.1    | 1,040                                | 32.2    | 1,800    | 42.1    |
| Fresno, CA       | 9,540                            | 3.7     | 1,340                                    | 18.9    | 440  | 20.0    | 480                                  | 14.3    | 1,520    | -7.3    |
| Kansas City, MO  | 8,960                            | 2.9     | 820                                      | -28.5   | 1,180  | 17.2    | 760                                  | 17.5    | 960      | -13.3   |
| Indianapolis, IN | 9,140                            | 1.9     | 740                                      | -26.0   | 1,000  | 32.7    | 760                                  | 26.7    | 1,940    | 20.2    |
| Rochester, NY    | 8,220                            | 3.5     | 920                                      | 1.5     | 880  | -2.9    | 1,140                                | 6.2     | 1,180    | 5.4     |
| El Paso, TX      | 8,680                            | -2.5    | 500                                      | -18.5   | 940  | -30.9   | 580                                  | -10.3   | 1,260    | -7.4    |
| Scranton, PA     | 6,640                            | 6.3     | 1,400                                    | -5.4    | 1,300  | 39.3    | 1,100                                | 32.0    | 1,660    | 27.7    |
| Bakersfield, CA  | 8,020                            | 7.3     | 1,100                                    | 7.1     | 440  | 69.2    | 360                                  | -20.6   | 720      | -27.0   |
| Louisville, KY   | 7,840                            | 4.7     | 520                                      | 6.8     | 720  | -3.6    | 720                                  | 35.0    | 1,160    | 32.8    |
| Springfield, MA  | 6,020                            | -9.7    | 1,080                                    | -0.6    | 680  | -5.6    | 1,420                                | 15.1    | 740      | -19.6   |
| Omaha, NE        | 6,340                            | -0.8    | 860                                      | 63.3    | 880  | 48.3    | 860                                  | 65.4    | 1,180    | 16.4    |
| Syracuse, NY     | 5,060                            | 9.8     | 1,120                                    | 34.4    | 620  | 9.4     | 980                                  | 33.6    | 740      | -17.2   |
| Toledo, OH       | 5,460                            | 6.2     | 300                                      | -18.2   | 1,200  | 30.4    | 400                                  | -1.6    | 1,000    | -9.6    |

Notes: Metro areas included in this table have at least 100,000 urban residents. The changes are calculated as the sum of the differences between the quarterly flows from 2021:Q1 through 2021:Q4 and the average of the equivalent quarterly flows from 2017:Q2 through 2020:Q1 divided by the sum of the same prepandemic average quarterly flows.

Sources: Federal Reserve Bank of New York Consumer Credit Panel/Equifax Data, American Community Survey, National Association of Realtors, and author's calculations.

Follow-Up Table 2. Estimates of Migrants Leaving Urban Neighborhoods of Metro Areas from 2021:Q1 through 2021:Q4, by Distance

|                    |          | To another region within 150 miles |          | To another region beyond 150 miles |  |  |
|--------------------|----------|------------------------------------|----------|------------------------------------|--|--|
|                    | Migrants | Change                             | Migrants | Change                             |  |  |
| New York, NY       | 84,600   | 39.5                               | 262,040  | 22.5                               |  |  |
| Los Angeles, CA    | 91,080   | 21.2                               | 169,200  | 18.2                               |  |  |
| Chicago, IL        | 11,920   | 23.8                               | 79,460   | 11.7                               |  |  |
| Miami, FL          | 10,040   | 46.6                               | 63,120   | 8.5                                |  |  |
| San Francisco, CA  | 45,720   | 29.8                               | 78,700   | 26.9                               |  |  |
| Washington, DC     | 19,680   | 16.1                               | 58,580   | 2.2                                |  |  |
| Boston, MA         | 24,740   | 29.4                               | 49,560   | 11.8                               |  |  |
| Philadelphia, PA   | 20,320   | 13.5                               | 29,020   | 20.1                               |  |  |
| San Diego, CA      | 13,680   | 8.5                                | 41,120   | 8.6                                |  |  |
| Houston, TX        | 3,320    | 6.2                                | 18,600   | -6.3                               |  |  |
| San Jose, CA       | 33,260   | 13.2                               | 30,460   | 17.4                               |  |  |
| Dallas, TX         | 2,260    | 10.1                               | 20,300   | -1.1                               |  |  |
| Seattle, WA        | 7,400    | 18.0                               | 29,100   | 12.9                               |  |  |
| Riverside, CA      | 16,120   | 13.7                               | 14,380   | 23.0                               |  |  |
| Las Vegas, NV      | 1,140    | 54.1                               | 29,140   | 21.8                               |  |  |
| Denver, CO         | 6,240    | 19.4                               | 23,940   | 17.3                               |  |  |
| Phoenix, AZ        | 1,960    | 30.1                               | 14,160   | 15.7                               |  |  |
| Baltimore, MD      | 8,700    | -0.2                               | 13,800   | 4.7                                |  |  |
| Minneapolis, MN    | 2,500    | 14.3                               | 12,460   | 6.4                                |  |  |
| Sacramento, CA     | 7,600    | 14.5                               | 10,140   | 7.6                                |  |  |
| Portland, OR       | 4,440    | 21.3                               | 14,540   | 16.3                               |  |  |
| Cleveland, OH      | 3,560    | -6.5                               | 8,860    | 17.5                               |  |  |
| Detroit, MI        | 2,560    | 14.6                               | 7,040    | 12.1                               |  |  |
| Pittsburgh, PA     | 2,360    | 27.8                               | 12,240   | 11.4                               |  |  |
| Providence, RI     | 6,700    | 17.5                               | 8,960    | 19.4                               |  |  |
| Atlanta, GA        | 1,060    | 13.6                               | 8,040    | 6.0                                |  |  |
| Milwaukee, WI      | 4,340    | -5.2                               | 8,040    | 11.2                               |  |  |
| Urban Honolulu, HI | 660      | 33.8                               | 17,580   | 4.7                                |  |  |
| St. Louis, MO      | 1,000    | 13.6                               | 7,760    | 11.1                               |  |  |
| Virginia Beach, VA | 1,660    | -8.8                               | 8,820    | 4.8                                |  |  |
| Columbus, OH       | 3,080    | 3.8                                | 4,760    | -6.3                               |  |  |
| Salt Lake City, UT | 3,500    | -0.4                               | 6,900    | 13.9                               |  |  |
| San Antonio, TX    | 880      | -19.5                              | 4,540    | -0.1                               |  |  |
| Bridgeport, CT     | 7,760    | 23.2                               | 5,220    | 12.5                               |  |  |
| Tampa, FL          | 1,960    | 56.4                               | 4,960    | 10.1                               |  |  |
| New Orleans, LA    | 2,040    | 25.9                               | 7,920    | 9.6                                |  |  |
| Cincinnati, OH     | 1,540    | 1.3                                | 5,140    | 12.9                               |  |  |
| Buffalo, NY        | 1,660    | 47.3                               | 6,500    | 11.3                               |  |  |
| Albany, NY         | 3,240    | 0.2                                | 3,680    | 14.0                               |  |  |
| Austin, TX         | 1,620    | 21.5                               | 4,000    | 9.3                                |  |  |
| Hartford, CT       | 2,680    | -7.6                               | 2,780    | -0.7                               |  |  |
| Stockton, CA       | 5,460    | 31.9                               | 3,180    | 12.8                               |  |  |
| New Haven, CT      | 4,100    | 8.3                                | 3,400    | 6.5                                |  |  |
| Oxnard, CA         | 2,920    | -4.2                               | 4,480    | 4.5                                |  |  |

Follow-Up Table 2. Estimates of Migrants Leaving Urban Neighborhoods of Metro Areas from 2021:Q1 through 2021:Q4, by Distance

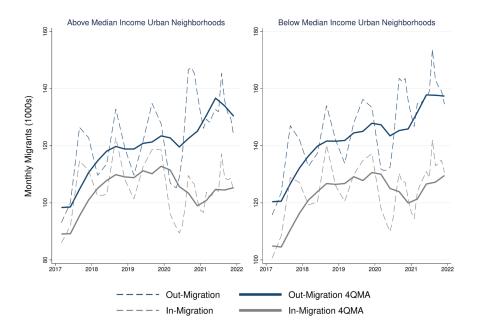
|                                 | To another re |           | To another region beyond |           |  |  |
|---------------------------------|---------------|-----------|--------------------------|-----------|--|--|
|                                 | 150 m         | 150 miles |                          | 150 miles |  |  |
|                                 | Migrants      | Change    | Migrants                 | Change    |  |  |
| Worcester, MA                   | 3,400         | 27.2      | 2,580                    | 24.8      |  |  |
| Allentown, PA                   | 4,140         | 34.1      | 2,060                    | 1.3       |  |  |
| Fresno, CA                      | 1,440         | -8.1      | 2,340                    | 17.8      |  |  |
| Kansas City, MO                 | 420           | -16.0     | 3,300                    | -3.1      |  |  |
| Indianapolis, IN                | 1,300         | 20.4      | 3,140                    | 8.8       |  |  |
| Rochester, NY                   | 1,020         | 11.7      | 3,100                    | 0.2       |  |  |
| El Paso, TX                     | 260           | -2.5      | 3,020                    | -18.7     |  |  |
| Scranton, PA                    | 3,180         | 27.5      | 2,280                    | 11.0      |  |  |
| Bakersfield, CA                 | 1,160         | 4.8       | 1,460                    | -9.9      |  |  |
| Louisville/Jefferson County, KY | 1,080         | 29.6      | 2,040                    | 12.9      |  |  |
| Springfield, MA                 | 1,980         | -2.0      | 1,940                    | 0.0       |  |  |
| Omaha, NE                       | 580           | 45.0      | 3,200                    | 42.0      |  |  |
| Syracuse, NY                    | 840           | 13.5      | 2,620                    | 14.6      |  |  |
| Toledo, OH                      | 1,320         | -3.9      | 1,580                    | 10.7      |  |  |

Notes: Metro areas included in this table have at least 100,000 urban residents. The changes are calculated as the sum of the differences between the quarterly flows from 2021:Q1 through 2021:Q4 and the average of the equivalent quarterly flows from 2017:Q2 through 2020:Q1 divided by the sum of the same prepandemic average quarterly flows.

Sources: Federal Reserve Bank of New York Consumer Credit Panel/Equifax Data, American Community Survey, National Association of Realtors, and author's calculations.

## **Appendix**

Figure A1a. Gross Flows into and out of Urban Neighborhoods That Contribute to Net Flows Presented in Figure 3, by Neighborhood Income



Sources: Federal Reserve Bank of New York/Equifax Consumer Credit Panel, American Community Survey, and author's calculations.

Figure A1b. Gross Flows into and out of Urban Neighborhoods That Contribute to Net Flows Presented in Figure 3, by Migrant Homeowner Status

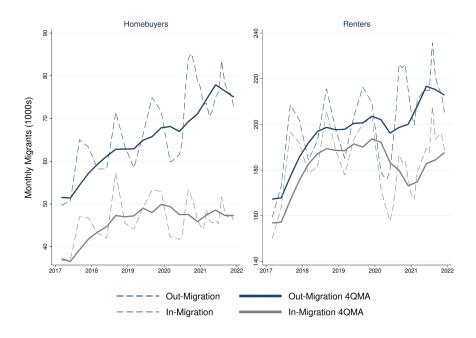


Figure A1c. Gross Flows into and out of Urban Neighborhoods That Contribute to Net Flows Presented in Figure 3, by Migrant Age

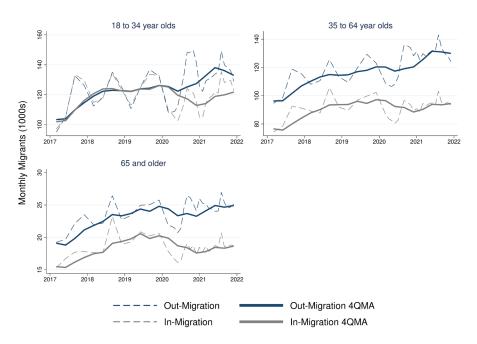


Figure A1d. Gross Flows into and out of Urban Neighborhoods That Contribute to Net Flows Presented in Figure 3, by Metro Area Population

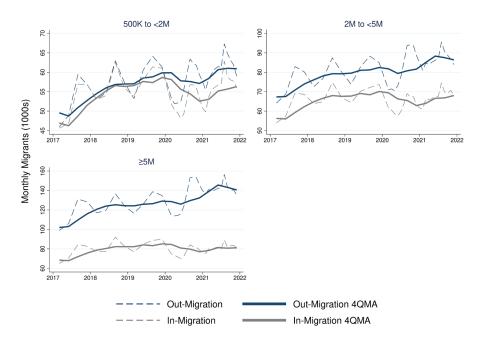


Figure A4. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Atlanta-Sandy Springs-Roswell, GA

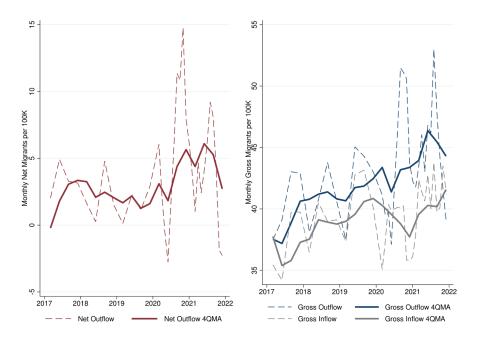


Figure A5. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Austin-Round Rock, TX

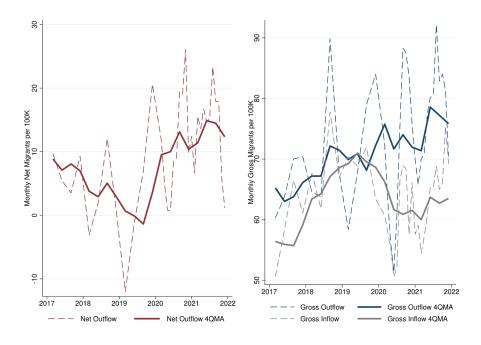
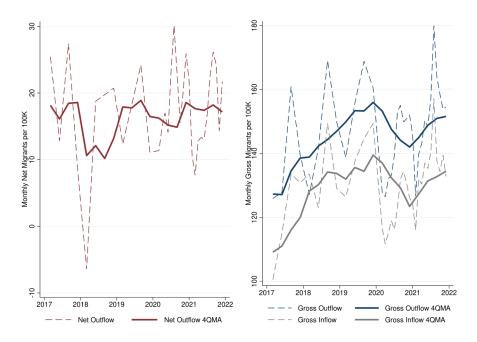


Figure A6. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Baltimore–Columbia–Towson, MD



 $\label{lem:control_problem} \textbf{Figure A7. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Birmingham-Hoover, AL}$ 

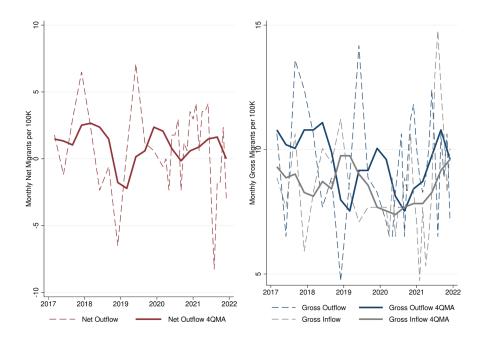


Figure A8. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Boston–Cambridge–Newton, MA–NH

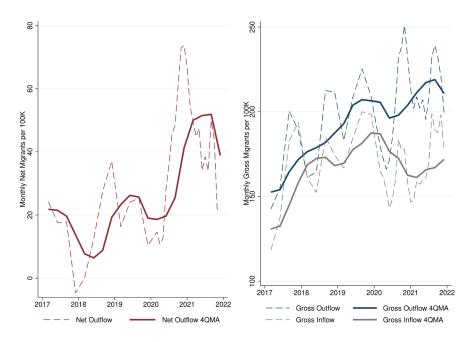


Figure A9. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Buffalo-Cheektowaga-Niagara Falls, NY

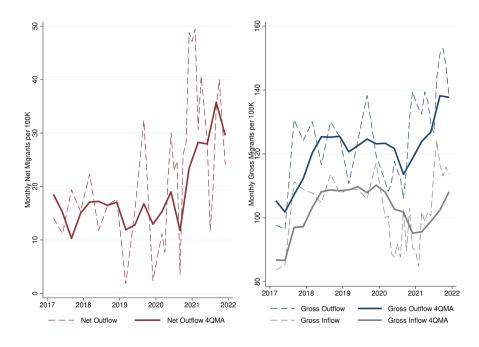


Figure A10. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Charlotte-Concord-Gastonia, NC-SC

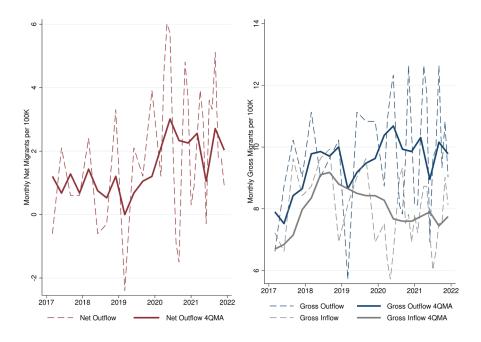


Figure A11. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Chicago-Naperville-Elgin, IL-IN-WI

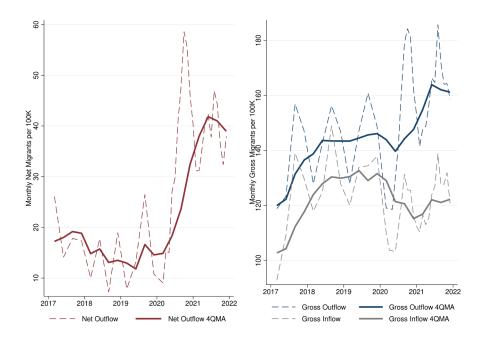


Figure A12. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Cincinnati, OH–KY–IN

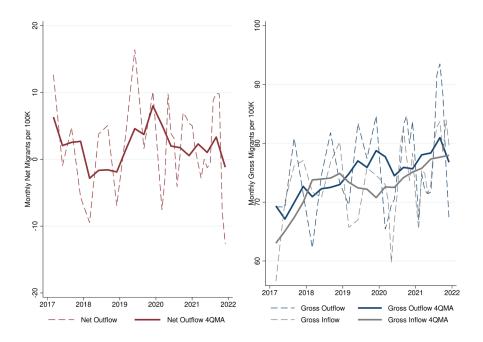
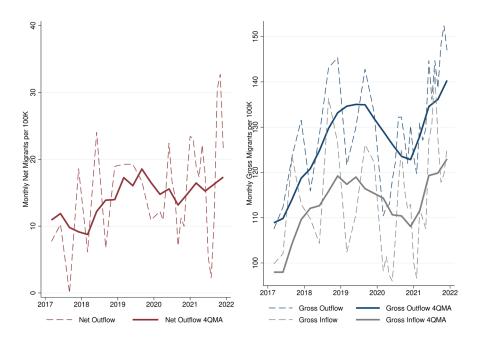


Figure A13. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Cleveland–Elyria, OH



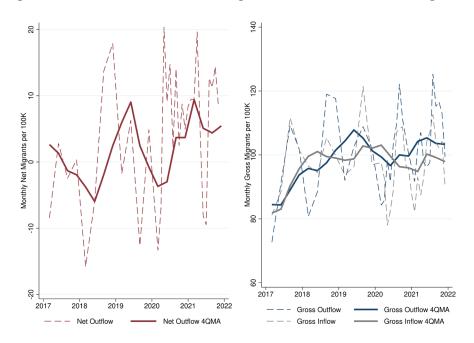
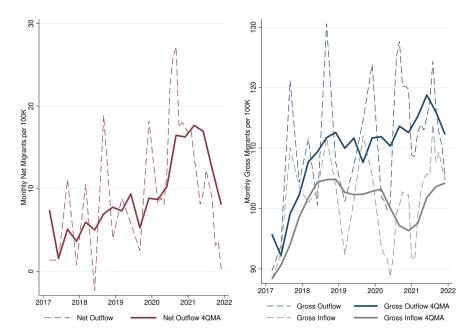


Figure A14. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Columbus, OH



 $Figure\ A15.\ Estimated\ Gross\ and\ Net\ Migration\ into\ and\ out\ of\ Urban\ Neighborhoods:\ Dallas-Fort\ Worth-Arlington,\ TX$ 

Figure A16. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Denver-Aurora-Lakewood, CO

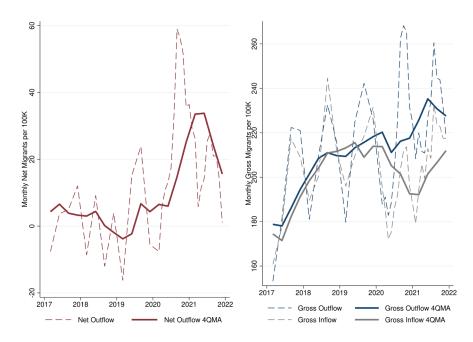


Figure A17. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Detroit-Warren-Dearborn, MI

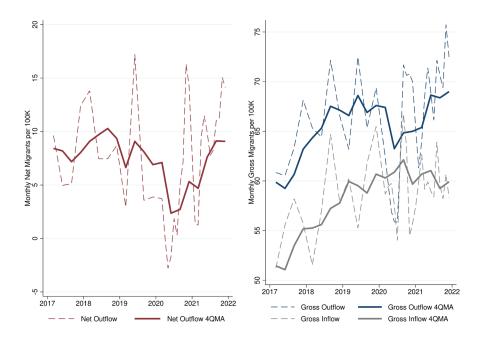


Figure A18. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Hartford-West Hartford-East Hartford, CT

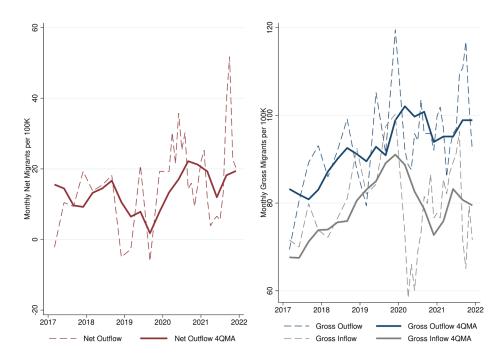


Figure A19. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Houston-The Woodlands-Sugar Land, TX

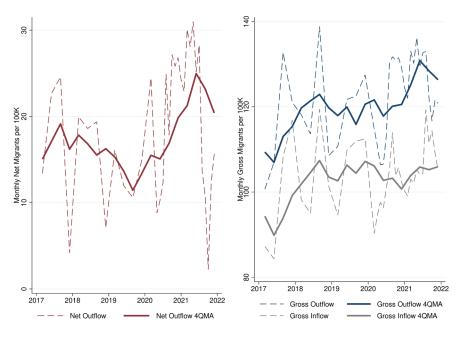


Figure A20. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Indianapolis—Carmel—Anderson, IN

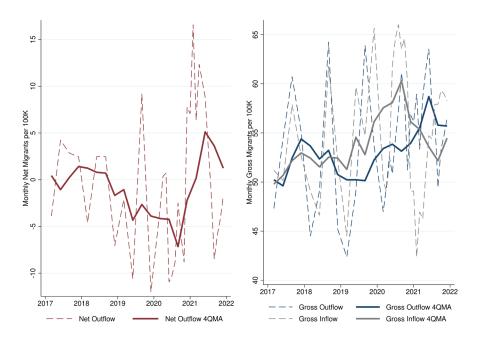
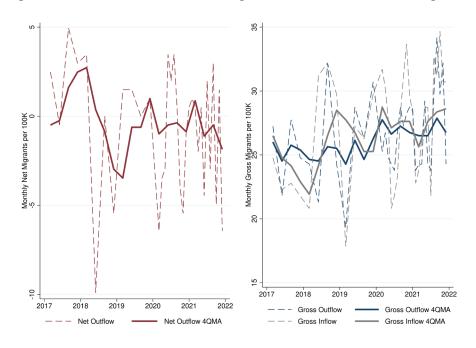


Figure A21. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Jacksonville, FL



9 Monthly Gross Migrants per 100K 40 Monthly Net Migrants per 100K 2018 2020 2021 2022 2017 2022 2017 2018 2020 2021 Gross Outflow 4QMA Gross Outflow Net Outflow 4QMA Gross Inflow Gross Inflow 4QMA

Figure A22. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Kansas City, MO-KS

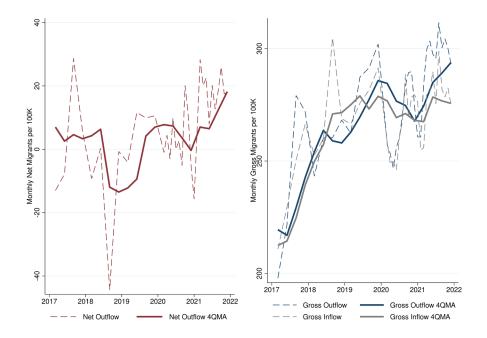


Figure A23. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Las Vegas-Henderson-Paradise, NV

Figure A24. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Los Angeles-Long Beach-Anaheim, CA

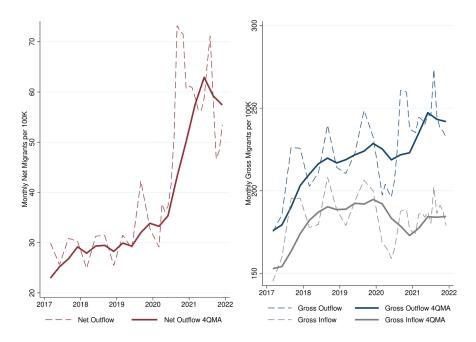


Figure A25. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Louisville/Jefferson County, KY-IN

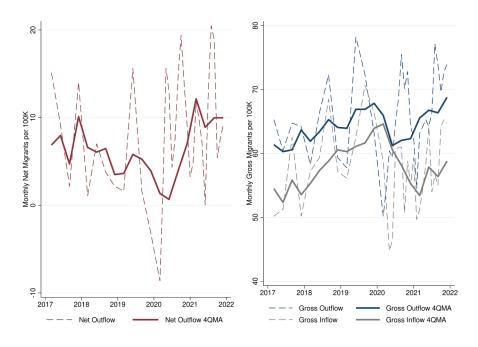


Figure A26. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Memphis, TN-MS-AR

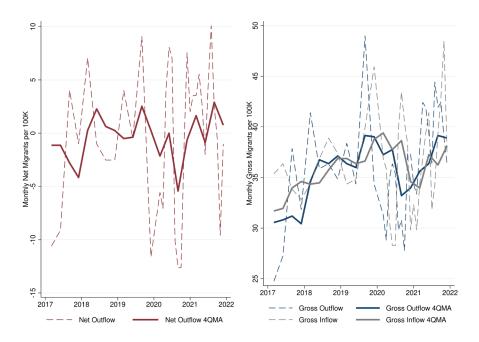


Figure A27. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Miami-Fort Lauderdale-West Palm Beach, FL

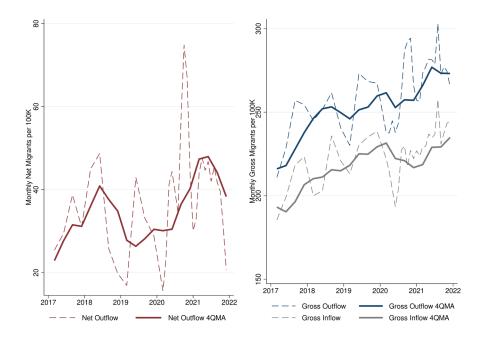


Figure A28. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Milwaukee–Waukesha–West Allis, WI

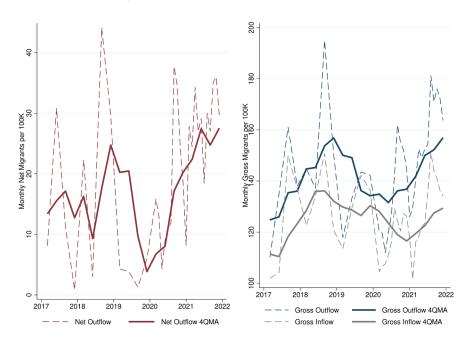


Figure A29. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Minneapolis-St. Paul-Bloomington, MN-WI

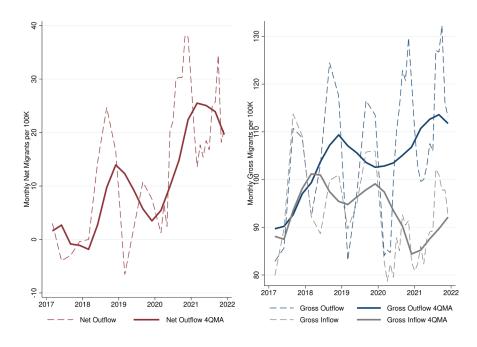


Figure A30. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Nashville-Davidson-Murfreesboro-Franklin, TN

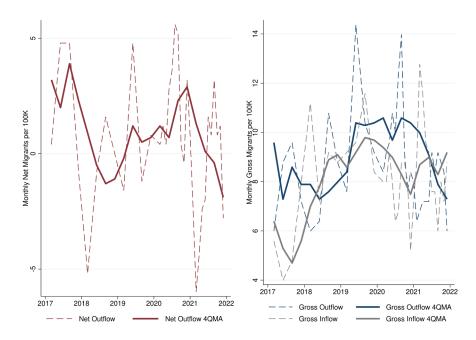


Figure A31. Estimated Gross and Net Migration into and out of Urban Neighborhoods: New Orleans—Metairie, LA

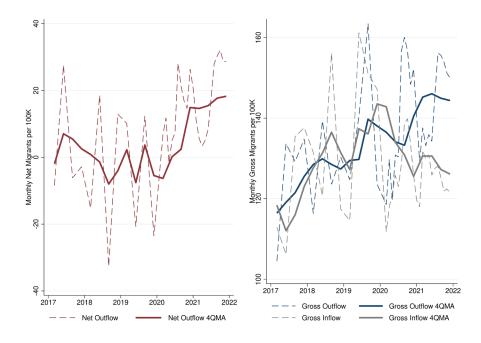


Figure A32. Estimated Gross and Net Migration into and out of Urban Neighborhoods: New York-Newark-Jersey City, NY-NJ-PA

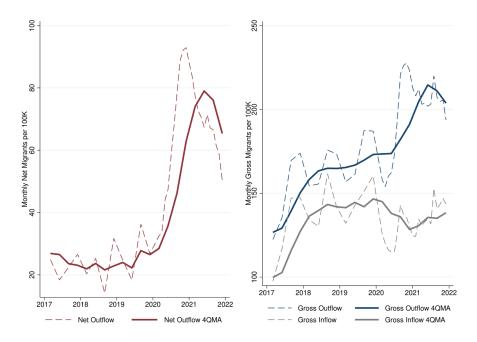


Figure A33. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Oklahoma City, OK

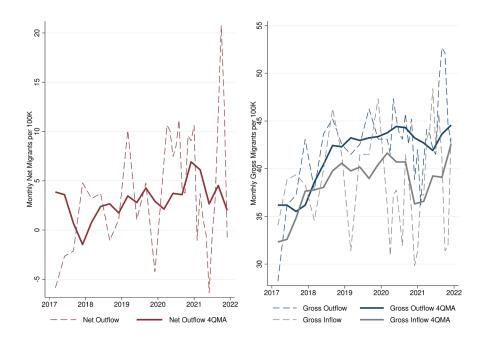


Figure A34. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Orlando-Kissimmee-Sanford, FL

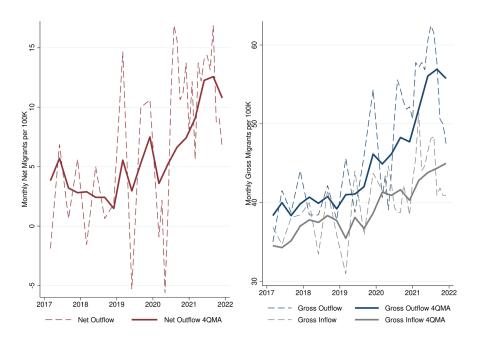


Figure A35. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Philadelphia—Camden—Wilmington, PA-NJ-DE-MD

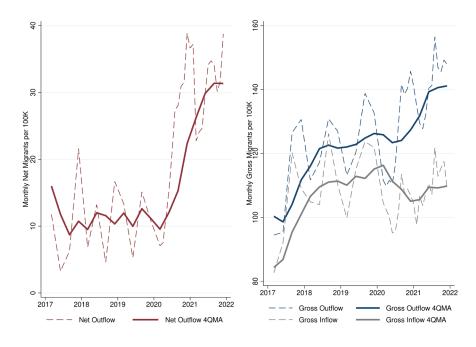


Figure A36. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Phoenix-Mesa-Scottsdale, AZ

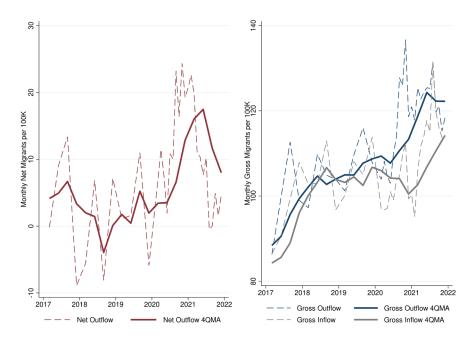


Figure A37. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Pittsburgh, PA

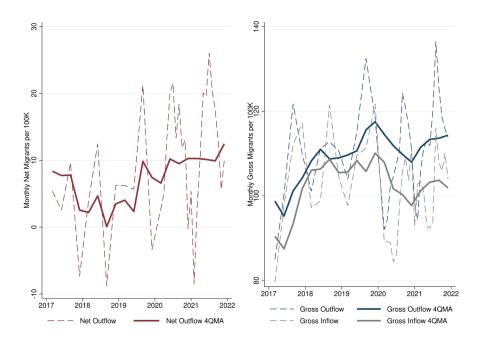


Figure A38. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Portland–Vancouver–Hillsboro, OR–WA

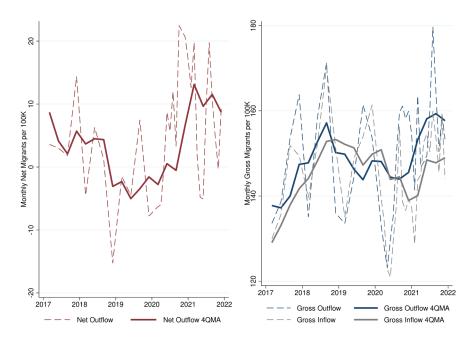
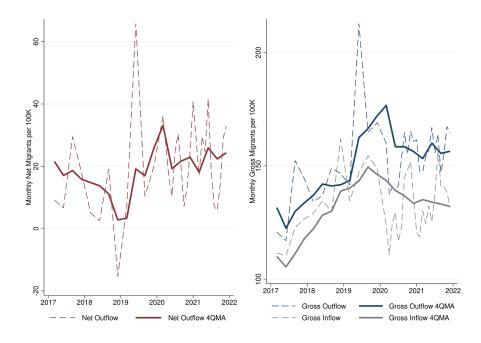


Figure A39. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Providence—Warwick, RI-MA



32 30 9 Monthly Gross Migrants per 100K Monthly Net Migrants per 100K 15 2018 2020 2021 2017 2018 2022 2017 2020 2021 Gross Outflow 4QMA Gross Outflow Net Outflow Net Outflow 4QMA Gross Inflow Gross Inflow 4QMA

Figure A40. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Raleigh, NC

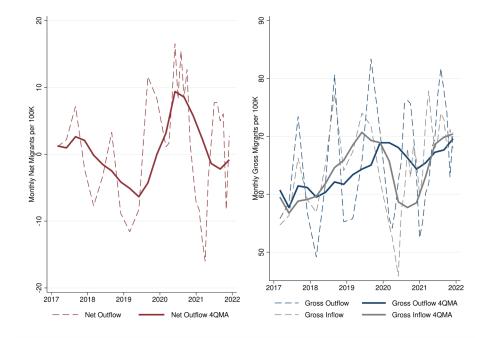


Figure A41. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Richmond, VA

Figure A42. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Riverside–San Bernardino–Ontario, CA

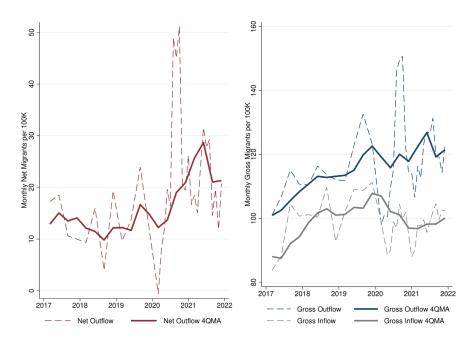


Figure A43. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Rochester, NY

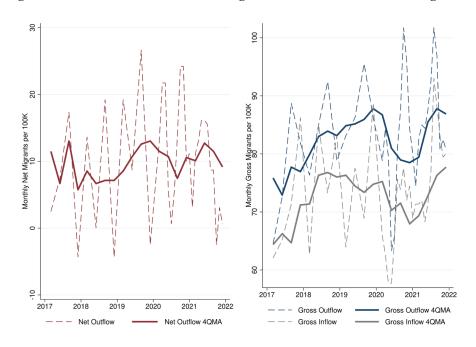


Figure A44. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Sacramento-Roseville-Arden-Arcade, CA

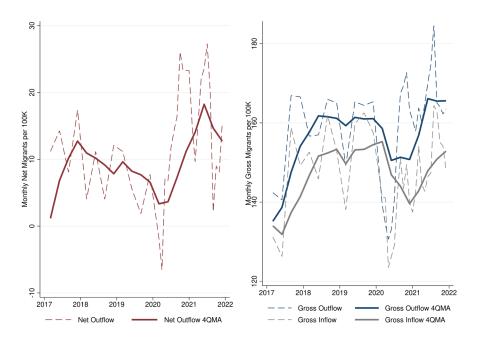
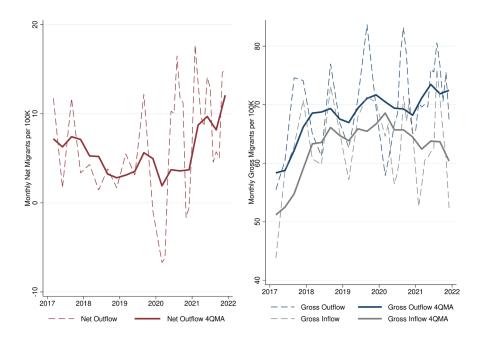


Figure A45. Estimated Gross and Net Migration into and out of Urban Neighborhoods: St. Louis, MO-IL



200 Monthly Gross Migrants per 100K Monthly Net Migrants per 100K 0 140 120 2018 2020 2021 2017 2018 2022 2020 2021 2017 Gross Outflow 4QMA Gross Outflow Net Outflow Net Outflow 4QMA Gross Inflow Gross Inflow 4QMA

Figure A46. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Salt Lake City, UT

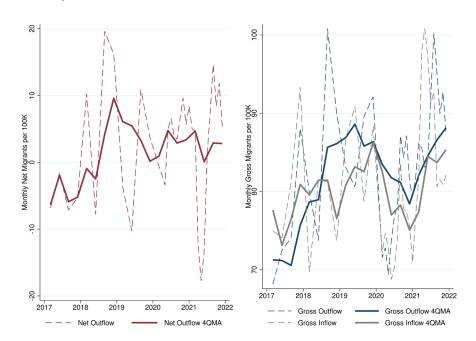


Figure A47. Estimated Gross and Net Migration into and out of Urban Neighborhoods: San Antonio-New Braunfels, TX

Figure A48. Estimated Gross and Net Migration into and out of Urban Neighborhoods: San Diego-Carlsbad, CA

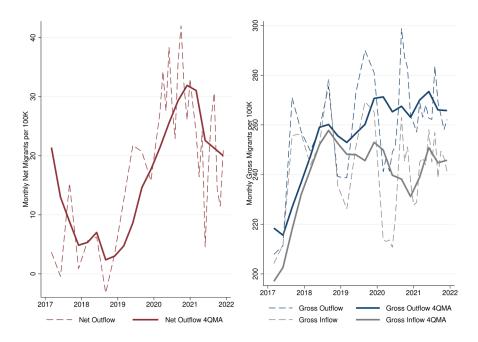


Figure A49. Estimated Gross and Net Migration into and out of Urban Neighborhoods: San Francisco-Oakland-Hayward, CA

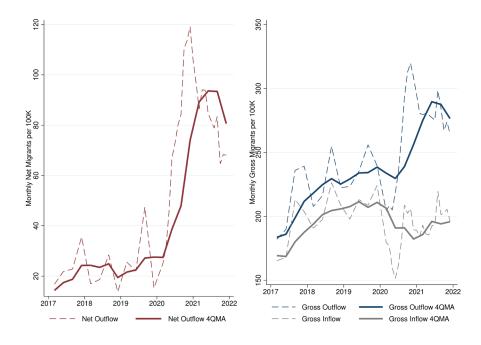


Figure A50. Estimated Gross and Net Migration into and out of Urban Neighborhoods: San Jose-Sunnyvale-Santa Clara, CA

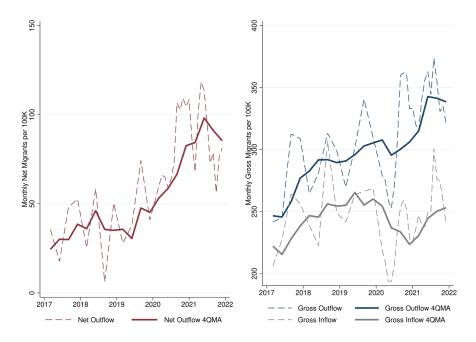


Figure A51. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Seattle-Tacoma-Bellevue, WA

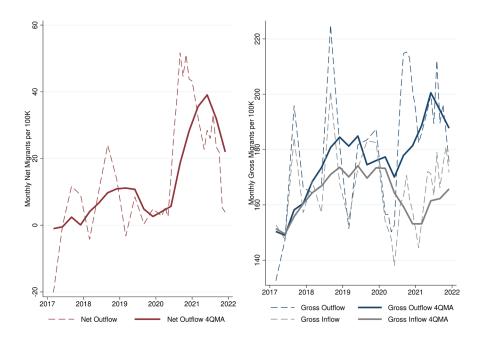


Figure A52. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Tampa–St. Petersburg–Clearwater, FL

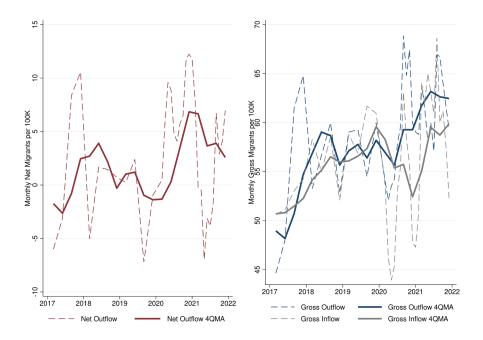
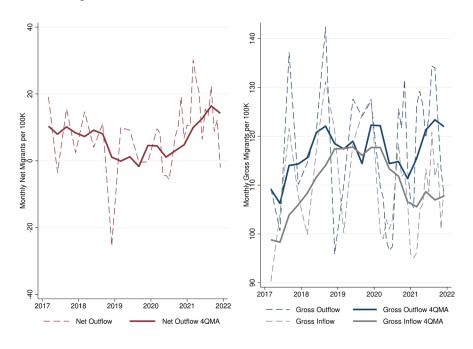


Figure A53. Estimated Gross and Net Migration into and out of Urban Neighborhoods: Virginia Beach-Norfolk-Newport News, VA-NC



 $Figure\ A54.\ Estimated\ Gross\ and\ Net\ Migration\ into\ and\ out\ of\ Urban\ Neighborhoods:\ Washington-Arlington-Alexandria,\ DC-VA-MD-WV$ 

