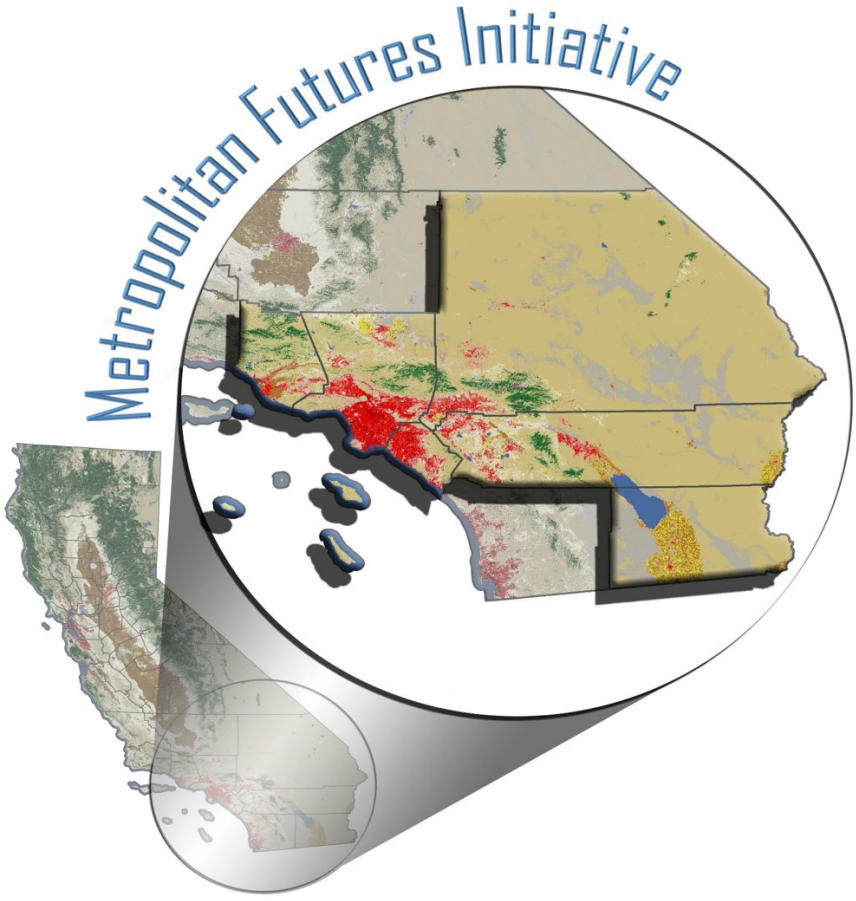
Metropolitan Futures Initiative (MFI) Quarterly Report:

Where Are the Highly Educated Moving? A Study of California

August 1, 2021



Presented by the Metropolitan Futures Initiative (MFI)
School of Social Ecology
University of California, Irvine

UCI University of California, Irvine

Inequality and segregation in Southern California

August 1, 2021

MFI Research Team

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About the Metropolitan Futures Initiative (MFI)

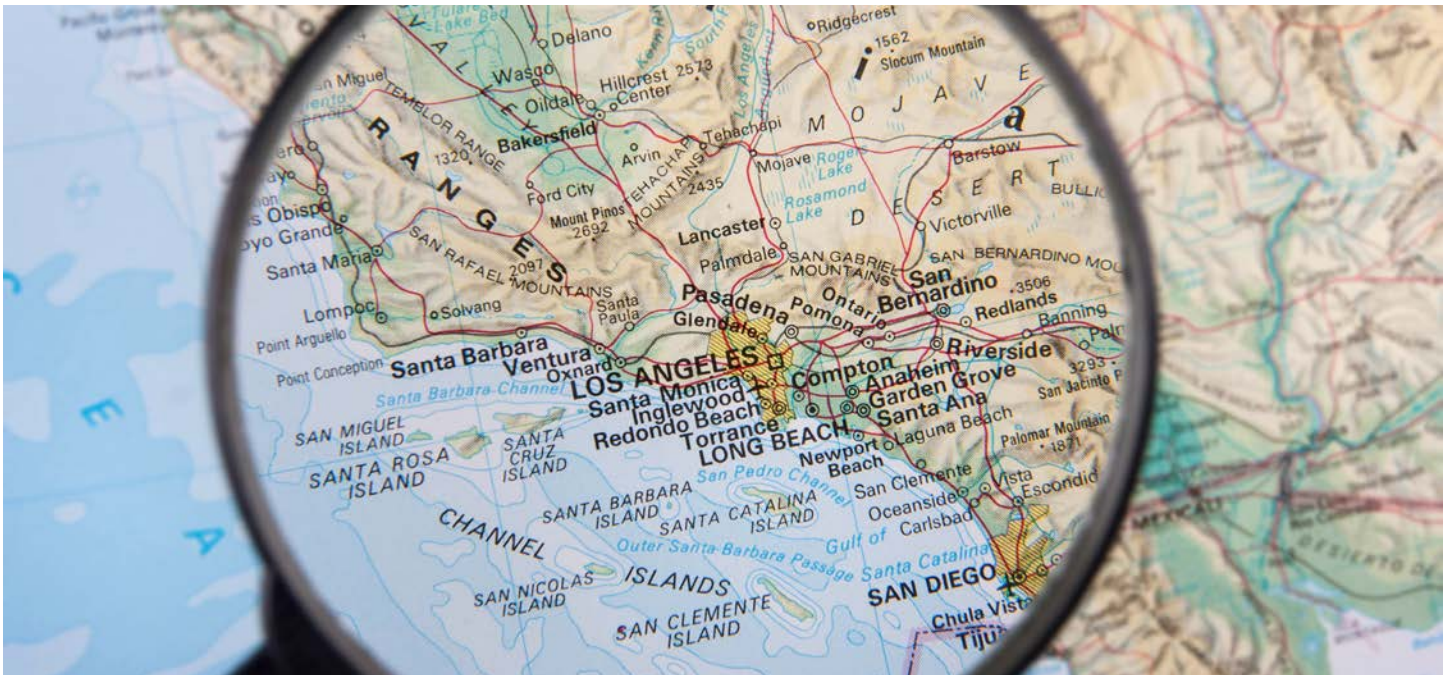
The Metropolitan Futures Initiative (MFI) *(http://socialecology.uci.edu/mfi)* in the School of Social Ecology at the University of California, Irvine aims to develop an improved understanding of communities and their potential for integrative and collaborative planning and action to ensure a bright future for the region. It approaches these goals by bringing together an interdisciplinary research team along with the insights and techniques of "big data" research.

By combining various large longitudinal and spatial data sources, and then employing cutting edge statistical analyses, the goal is to come to a better understanding of how the various dimensions of the social ecology of a region move together to produce the outcomes observed within our neighborhoods.

With initial focus on Orange County and its location within the larger Southern California area, The Metropolitan Futures Initiative is a commitment to build communities that are economically vibrant, environmentally sustainable, and socially just by partnering the School of Social Ecology's world class, boundary-crossing scholarship with expertise throughout Southern California.

The *MFI Quarterly Report* series presents cutting edge research focusing on different dimensions of the Southern California region, and the consequences for neighborhoods in the region. Reports released each quarter focus on issues of interest to the public as well as policymakers in the region. In addition, the MFI webpage (mfi.soceco.uci.edu) provides interactive mapping applications that allow policymakers and the public to explore more deeply the data from each Quarterly Report.

The MFI gratefully acknowledges the Heritage Fields El Toro, LLC for their funding support.



The MFI Research Team:

John R. Hipp is the Director of the Metropolitan Futures Initiative (MFI). He is a professor in the Department of Criminology, Law and Society, the Department of Urban Planning and Public Policy, and the Department of Sociology, at the University of California Irvine. He is also co-director of the Irvine Lab for the Study of Space and Crime (ILSSC). His research interests focus on how neighborhoods change over time, how that change both affects and is affected by neighborhood crime, and the role networks and institutions play in that change. He approaches these questions using quantitative methods as well as social network analysis.

Jae Hong Kim is a member of the MFI Executive Committee and a faculty member in the Department of Urban Planning and Public Policy at the University of California, Irvine. His research focuses on urban economic development, land use change, and the nexus between these two critical processes. His academic interests also lie in institutional environments — how institutional environments shape urban development processes — and urban system modeling. His scholarship attempts to advance our knowledge about the complex mechanisms of contemporary urban development and to develop innovative urban planning strategies/tools for both academics and practitioners.

Benjamin Forthun is a Ph.D. student in the department of Criminology, Law and Society, at the University of California, Irvine. His research interests are focused on GIS analysis, aggregate spatial research, and neighborhood definitions and boundaries.

Nene Osutei is a doctoral candidate in the Department of Urban Planning and Public Policy at the University of California, Irvine. His academic interests lie in economic development and social equity. His research explores the changing roles of higher education institutions with an emphasis on their contributions to economic development at different geographical scales.

Romeo Ignacio graduated with a B.A. in Quantitative Economics and a B.S. in Mathematics, at the University of California, Irvine. His research interests include public policy, economics, and other social sciences. He will be attending the University of California, San Diego in Fall 2021 to pursue an M.S. in Statistics.

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Results in Brief

- We explored residential mobility patterns among residents of California counties across four decades: 1985-90; 1995-2000; 2005-09, and 2015-19. We focused explicitly on highly educated residents (those with at least a Bachelor's degree)
- We also explored in more depth the mobility within southern California counties by these highly educated residents

Results for California:

- San Francisco County has received the largest percentages of highly educated residents, and this percentage has increased sharply over time. In part, this is due to the general increase in educational attainment over this time period.
- Marin County has consistently received a large in-flow of highly educated residents over time
- Alameda and Napa counties have seen sharp increases in highly educated residents during the 2010s.
- Some regions may have large in-flows of highly educated residents, but also large outflows. We therefore also directly compared the ratio of incoming to outgoing highly educated residents.
- Comparing in-movers to out-movers, in 2019 Imperial County has the highest ratio with nearly twice as many in-movers as out-movers with high education. This was not the case in earlier decades.
- Napa County has consistently received relatively more highly educated residents compared to those leaving.
- Imperial, Madera, and Napa counties had the largest relative inflow of young highly educated residents in the 2010s.
- Imperial County has generally shown a relative inflow of young highly educated residents over the last several decades.
- Shasta and El Dorado counties have the largest relative inflow of middle aged highly educated residents. Napa and Placer counties have also experienced a relative inflow.
- Imperial County experienced a relatively high inflow of older highly educated residents in the 2010s.
- Madera County has consistently experienced a relative inflow of older highly educated residents.
- Tulare County received a relative inflow of older highly educated residents in the most recent decade.
- Humboldt County in the northwest and San Luis Obispo County along the central coast have consistently experienced a relative outflow of young highly educated residents.
- Kings County, in the center of the state, has generally experienced a relative outflow of middle aged highly educated residents.
- Shasta County has generally experienced a relative inflow of middle age highly educated residents
- In the 1980s there was a relatively large in-flow of older highly educated residents into the rural northeastern counties of Plumas, Sierra, and Nevada. This inflow continued, though somewhat smaller, in the following two decades.

Results for Southern California:

- In the earlier decades Ventura County received a relatively large inflow of young and middle-aged highly educated residents, but this has faded more recently.
- Ventura and San Diego Counties have consistently received a relative inflow of older highly educated residents.
- In the two most recent decades Imperial County has received a much larger relative inflow of highly educated residents, and these tend to be younger or older (but fewer middle aged).

Results in Brief (cont.)

- Orange County has consistently experienced a relative inflow of middle-aged highly educated residents. They have also received a relative inflow of younger highly educated residents, though this is weaker in the two most recent decades.
- San Bernardino County has consistently experienced an overall relative outflow of highly educated residents.
- Although San Bernardino experienced a relative outflow of middle aged highly educated residents during the 1980s, the balance has consistently improved since then and now the inflow is slightly larger than the outflow.
- Riverside has consistently received the largest inflow of older highly educated residents compared to the rest of the region. They also received a relative inflow of middle-aged highly educated residents during the 2000s, but not in other decades.
- Los Angeles County has consistently experienced the strongest relative inflow of young highly educated residents.
- Los Angeles County experienced a relative outflow of older highly educated residents in earlier decades, but this has improved more recently.

Race/ethnicity of highly educated movers:

- Orange County has consistently experienced one of the largest relative inflows of Asian highly educated residents over time.
- San Bernardino County has consistently experienced a relative outflow of White highly educated residents.
- Riverside and San Bernardino Counties experienced relative inflows of Black highly educated residents during the 1980s and 1990s but that has diminished more recently.
- Los Angeles County has experienced a relative inflow of Black highly educated residents in recent decades.
- Los Angeles County has consistently experienced relative inflows of Latino highly educated residents, and this was strongest in the 1980s.
- Los Angeles and San Diego Counties experience a relative inflow of Asian highly educated residents, although this has weakened in recent decades.
- Until the most recent decade, San Diego County experienced a relative outflow of Black highly educated residents.
- Ventura County has consistently experienced one of the largest relative inflows of Latino highly educated residents over time.

Chapter 1:
Background on residential mobility

The economic vitality of regions depends, at least in part, on the human capital of residents who live in the area. An important part of this human capital is the level of formal education that residents have, and therefore in recent decades the presence of at least a Bachelor's Degree from a university is an important marker of a skilled worker (as well as of productivity), especially with the increasing growth of the white-collar sector of the economy. Evidence from cities suggests that the high demand for such workers increases the willingness of local employers to pay for this labor, resulting in an increase in wages for both skilled and unskilled workers in the area. Concentrations of highly educated workers can therefore create demand for additional services and amenities within a region generating a self-reinforcing cycle of economic growth.

An important implication of the concentration of highly educated residents is the out-migration that has taken place in regions with relatively fewer economic opportunities, fueling the so-called "brain drain" phenomenon, particularly amongst college graduates, one of the most mobile groups in the country. The outflow of younger, well-educated residents can make it more difficult to attract firms and industries, particularly in the high growth science and technology sectors. Additionally, declining populations and shrinking tax bases in jurisdictions affected by "brain drain" may make it harder for them to deliver public services efficiently.

Given the importance of highly educated residents, the question we focus on here is where these highly educated residents are moving, and what that says for the economic potential of a region. An area with greater economic potential is typically one that is experiencing a relatively large inflow of highly educated residents. This may be particularly the case if these highly educated residents are relatively young, and therefore contain the recent skills that can be useful for newer industries in the economy. We emphasize that, first, we are here focused on the migration flows of these highly educated residents, and not where they live in the largest proportions. We also emphasize that we are not attempting to determine whether people follow jobs or jobs follow people. Many scholars are interested in this thorny question, but we do not address it here. Instead, our focus is on how the geography of human capital is changing in the state due to these migration patterns.

In this Report, we use data from the U.S. Census Bureau (the public use microdata series, or PUMS) over four decades to track how these mobility patterns of highly educated workers have changed over this time period. We thus use data showing mobility patterns between counties in California from 1985-90, 1995-2000, 2005-10, and 2014-19 (the most recent time point available to us). A limitation we acknowledge is that this data source only provides information for geographic units with at least 100,000 population, and therefore we do not have information specifically related to smaller counties. Instead, some small counties are combined together in the data, and we are therefore unable to distinguish between them. We also make a distinction regarding the age of these migrants, whether young (aged 22-34), middle-aged (aged 35-49), or older (aged 50-64). In the latter part of the Report we will focus on southern California and ask which neighborhoods these highly educated residents are tending to move into. In these analyses, we will define neighborhoods based on public use microdata areas (PUMAs). These are Census-defined units that are created to have at least 100,000 persons. They are larger than typical neighborhoods, but are necessary for our analyses since we use the household-level data to assess the migration patterns of persons cross-classified by both age and educational achievement. PUMAs are designed to often be constrained to a single city (in the case of bigger cities). So, for example, a city like Irvine with a little over 200,000 residents has two PUMAs, whereas two smaller cities may be combined into a single PUMA.

Chapter 2:
Residential mobility in California for the highly educated

We will focus in this Chapter on residential mobility between counties in the state of California. This allows us to see which counties are gaining more highly educated residents, particularly among certain age groups. We first look at the composition of people moving into a county, and ask what percentage of those migrants have a high level of education (defined as having at least a Bachelor's degree).

Migration flows of highly educated residents

In Table 2.1 we list the top 10 counties receiving highly educated residents in 2010—that is, the counties in which highly educated residents are a high percentage of the inflowing residents. The table also shows the percentage of highly educated residents these counties received in the three earlier decades. We see that the San Francisco Bay area dominates the top of this list. The highest proportion of highly educated residents among in-movers occurs in San Francisco County, and this percentage has increased sharply over time. In the 1980s, 37% of in-movers had at least a Bachelor's degree, whereas this increased to 55% and 58% in the 1990s and 2000s, and to 69% in the 2010s. Thus, 7 of every 10 residents moving to San Francisco County in the 2010s have at least a Bachelor's degree. San Mateo and Santa Clara counties rank numbers 2 and 3, and have also experienced sharp increases over time. Whereas Marin County has consistently received a large in-flow of highly educated residents over time, Alameda and Napa counties have seen sharp increases during the 2010s.

The highest ranked southern California county is Orange County (at #7) and it has increased from 26% to 42% over this time period. Los Angeles County ranks #9.

Table 2.1. Top 10 Counties in California for percent highly educated of in-movers in 2019

Rank	Name	1990	2000	2009	2019
1	San Francisco	37%	55%	58%	69%
2	San Mateo	32%	43%	43%	60%
3	Santa Clara	30%	39%	39%	57%
4	Marin	41%	50%	43%	52%
5	Alameda	27%	35%	35%	52%
6	Napa	24%	25%	25%	48%
7	Orange	26%	28%	29%	42%
8	Contra Costa	30%	32%	29%	41%
9	Los Angeles	21%	23%	28%	38%
10	Nevada	25%	24%	31%	38%

While the inflow of highly educated residents can be beneficial to a county, that is only half of the equation, so to speak, as we also need to account for how many are leaving the county.

Table 2.2 shows the top 10 counties in which highly educated residents are a high percentage of those leaving the county. Interestingly, the San Francisco Bay area is well represented on this list as well.

Table 2.2.Top 10 Counties in California for percent highly educated of out-movers in 2019

Rank	Name	1990	2000	2009	2019
1	San Francisco	33%	45%	54%	66%
2	Yolo	52%	42%	48%	57%
3	Santa Clara	27%	33%	37%	52%
4	San Mateo	28%	33%	39%	51%
5	Alameda	26%	31%	35%	47%
6	Marin	36%	41%	38%	46%
7	Orange	24%	25%	27%	39%
8	Los Angeles	20%	22%	26%	36%
9	Contra Costa	26%	30%	25%	36%
10	San Diego	21%	25%	27%	36%

The importance of both in-flows and out-flows of highly educated residents therefore suggests the need to incorporate both into a single measure. We do that in the next table, in which we compute the ratio of highly educated in-movers to out-movers. Thus, this creates a ratio of the two prior measures. Thus, for this measure a value of 1 indicates that the proportion of highly educated residents entering the county is equal to the proportion of highly educated residents exiting the county. Values greater than 1 indicate that there is a larger in-flow of highly educated residents, whereas values less than 1 indicate that there is a larger out-flow of highly educated residents.

Table 2.3 shows the top 20 counties in 2019, and we see that Imperial County has the highest ratio, as the percent of in-movers with high education is nearly double the percent of out-movers with high education. This is a dramatic increase from the prior decades, especially the 1980s and 1990s when this county was not receiving a relative inflow of highly educated residents. Napa County has consistently received relatively more highly educated compared to those leaving. Madera County, just above Fresno, has the third highest ratio in the 2010s, as has generally received high inflows (except in the 2000s). Likewise, El Dorado County, and Nevada and Sierra Counties (which are combined in these data) have consistently experienced a relative inflow of highly educated residents.

Table 2.3.Top 20 Counties in California for ratio of highly educated in-movers to out-movers in 2019

Rank	Name	1990	2000	2009	2019
1	Imperial	1.03	0.90	1.26	1.94
2	Napa	1.25	1.26	1.29	1.58
3	Madera	1.28	1.31	0.75	1.57
4	El Dorado	1.45	1.34	1.82	1.29
5	Nevada	1.55	1.34	1.41	1.22
6	Sierra	1.55	1.34	1.41	1.22
7	Del Norte	0.80	1.00	0.69	1.20
8	Lassen	0.80	1.00	0.69	1.20
9	Plumas	1.55	1.34	1.41	1.20
10	Modoc	0.80	1.00	0.69	1.20
11	Siskiyou	0.80	1.00	0.69	1.20
12	San Mateo	1.16	1.29	1.11	1.18
13	Placer	1.36	1.34	1.16	1.17
14	Calaveras	0.67	1.20	1.11	1.17
15	Alpine	0.67	1.20	1.11	1.17
16	Amador	0.67	1.20	1.11	1.17
17	Inyo	0.67	1.20	1.11	1.17
18	Mariposa	0.67	1.20	1.11	1.17
19	Mono	0.67	1.20	1.11	1.17
20	Tuolumne	0.67	1.20	1.11	1.17

Migration flows of highly educated residents by age categories

In this section, we split the inflow and outflow ratios of highly educated residents by age group—young, middle aged, or older.

Table 2.4 lists the top 20 counties based on highest relative inflow (compared to outflow) of younger highly educated residents in 2019. This table shows that in 2019, Imperial, Madera, and Napa counties had the highest ratio of highly educated in-movers to out-movers among young residents (aged 22-34). Interestingly, Imperial County has generally shown a relative inflow of this age group over the last several decades. Various northern California counties such as Mendocino and Lake, and Nevada and Sierra, also have experienced a relative inflow of young highly educated residents in recent decades.

Table 2.4. Top 20 Counties in California for ratio of highly educated in-movers to out-movers of 22-34 year olds in 2019

Rank	Name	1990	2000	2009	2019
1	Imperial	1.49	0.88	1.87	2.88
2	Madera	1.28	1.06	0.86	2.44
3	Napa	1.11	1.15	1.62	2.20
4	Mendocino	0.87	1.21	2.13	1.64
5	Lake	0.87	1.21	2.13	1.64
6	Nevada	1.46	1.33	1.19	1.57
7	Sierra	1.46	1.33	1.19	1.57
8	Del Norte	0.65	1.16	0.65	1.47
9	Lassen	0.65	1.16	0.65	1.47
10	Modoc	0.65	1.16	0.65	1.47
11	Plumas	1.46	1.33	1.19	1.47
12	Siskiyou	0.65	1.16	0.65	1.47
13	El Dorado	1.37	1.48	2.46	1.40
14	San Mateo	1.35	1.61	1.20	1.33
15	Trinity	0.50	1.30	1.60	1.23
16	Glenn	0.50	1.30	1.60	1.23
17	Colusa	0.50	1.30	1.60	1.23
18	Tehama	0.50	1.30	1.60	1.23
19	Contra Costa	1.28	1.19	1.20	1.22
20	Stanislaus	0.71	0.95	1.03	1.20

In Table 2.5 we show the top 20 counties for relative inflow of middle aged highly educated residents (aged 35-49). The top two counties are Shasta and El Dorado, with Napa and Placer counties also experiencing a general relative inflow.

Table 2.5. Top 20 Counties in California for ratio of highly educated in-movers to out-movers of 35-49 year olds in 2019

Rank	Name	1990	2000	2009	2019
1	Shasta	1.41	0.99	1.91	2.36
2	El Dorado	1.26	1.37	1.85	1.91
3	Napa	1.46	1.49	0.95	1.37
4	Placer	1.43	1.37	1.02	1.30
5	Sutter	1.06	0.92	0.59	1.21
6	Yuba	1.06	0.92	0.59	1.21
7	Contra Costa	1.14	1.17	1.22	1.18
8	Stanislaus	0.97	0.95	0.93	1.14
9	San Luis Obispo	0.89	0.93	0.92	1.14
10	Fresno	1.02	1.05	1.03	1.11
11	Marin	1.13	1.25	1.17	1.10
12	Ventura	1.21	1.19	1.00	1.10
13	Lake	0.85	1.14	0.67	1.09
14	Mendocino	0.85	1.14	0.67	1.09
15	Orange	1.08	1.12	1.09	1.09
16	Alameda	0.96	1.07	0.94	1.08
17	San Mateo	1.05	1.16	1.08	1.07
18	Sacramento	0.97	0.97	1.00	1.07
19	Del Norte	0.77	0.91	0.83	1.06
20	Modoc	0.77	0.91	0.83	1.06

Table 2.6 shows the top 20 counties for relative inflow of older highly educated residents (aged 50-64). Imperial County tops this list, with a ratio of 3 to 1 in 2019. Tulare and Madera counties also rank high—Madera has consistently experienced a relative inflow of older highly educated residents, whereas for Tulare this is a recent phenomenon that has only occurred in the most recent decade.

Table 2.6. Top 20 Counties in California for ratio of highly educated in-movers to out-movers of 50-64 year olds in 2019

Rank	Name	1990	2000	2009	2019
1	Imperial	0.78	0.89	1.49	2.99
2	Tulare	0.77	1.05	0.92	1.87
3	Madera	2.13	1.85	1.22	1.85
4	Inyo	1.36	1.76	1.30	1.59
5	Alpine	1.36	1.76	1.30	1.59
6	Amador	1.36	1.76	1.30	1.59
7	Calaveras	1.36	1.76	1.30	1.59
8	Mariposa	1.36	1.76	1.30	1.59
9	Tuolumne	1.36	1.76	1.30	1.59
10	Mono	1.36	1.76	1.30	1.59
11	Nevada	4.60	1.40	1.68	1.45
12	Sierra	4.60	1.40	1.68	1.45
13	Monterey	1.15	1.32	0.85	1.37
14	Sonoma	1.20	1.08	1.01	1.35
15	Shasta	1.30	1.11	1.05	1.29
16	Placer	1.28	1.32	1.25	1.12
17	Solano	0.98	1.01	0.96	1.11
18	Riverside	1.18	1.23	1.24	1.10
19	Butte	1.12	1.00	0.84	1.10
20	San Luis Obispo	1.31	1.24	1.11	1.10

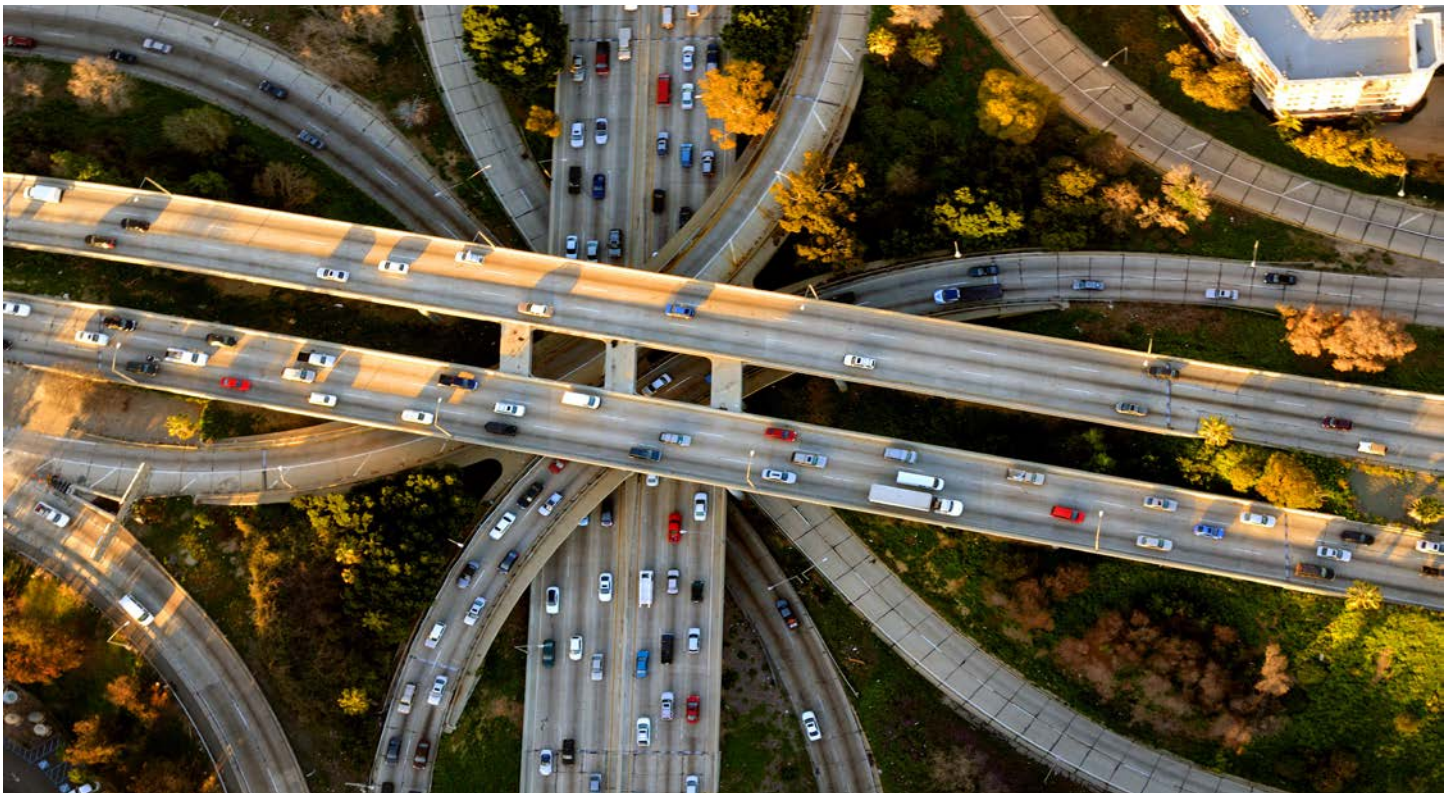
Maps of ratio of highly educated in-movers to out-movers by age group

The previous tables showed the counties with the highest ratios of inflows to outflows of highly educated residents by different age groups. In this section we display maps of all counties in the state to get a better sense of where relative inflows, as well as relative outflows, are occurring.

Ratio of highly educated in-movers to out-movers, among 22-34 year olds

In the next four maps (Figures 2.1-2.4), we show which counties are experiencing more in-movement relative to out-movement of highly educated young adults (aged 22-34 years). These maps show how these flows change over the four decades of our study (1980s, 1990s, 2000s, 2010s). The first map, labeled 1990, is capturing flows during the late 1980s (1985-1990). On these maps, the blue areas are counties experiencing a relative outflow of younger highly educated residents, whereas the red areas represent counties experiencing a relative inflow of younger highly educated residents. The key patterns we observe are:

- Although the northeastern counties experienced a relative outflow in the 1980s of young highly educated residents, this improved in the 1990s and 2000s.
- Humboldt County in the northwest has consistently experienced a relative outflow of young highly educated residents.
- San Luis Obispo County along the central coast between Los Angeles and San Francisco has consistently experienced a relative outflow of young highly educated residents.



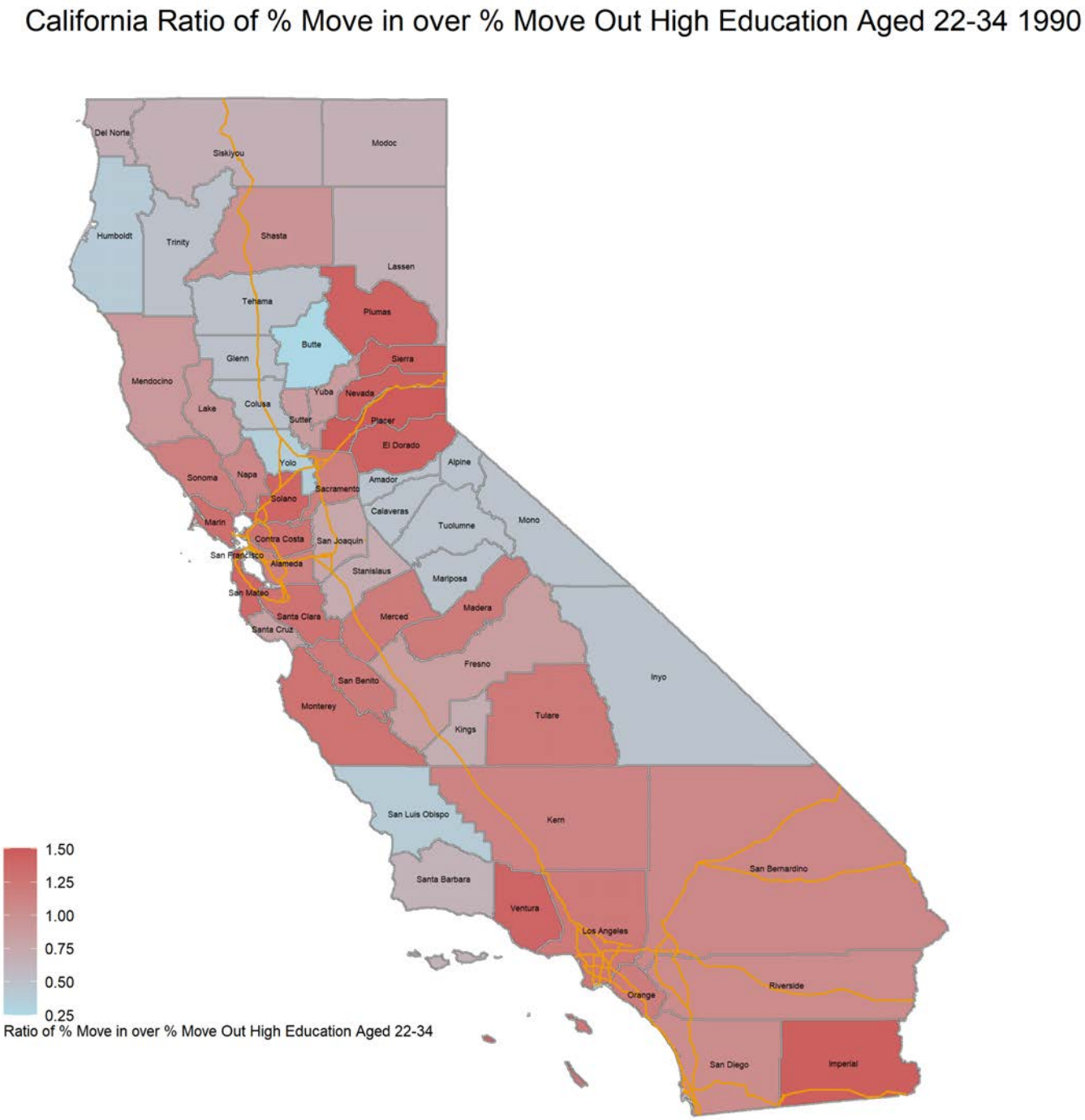
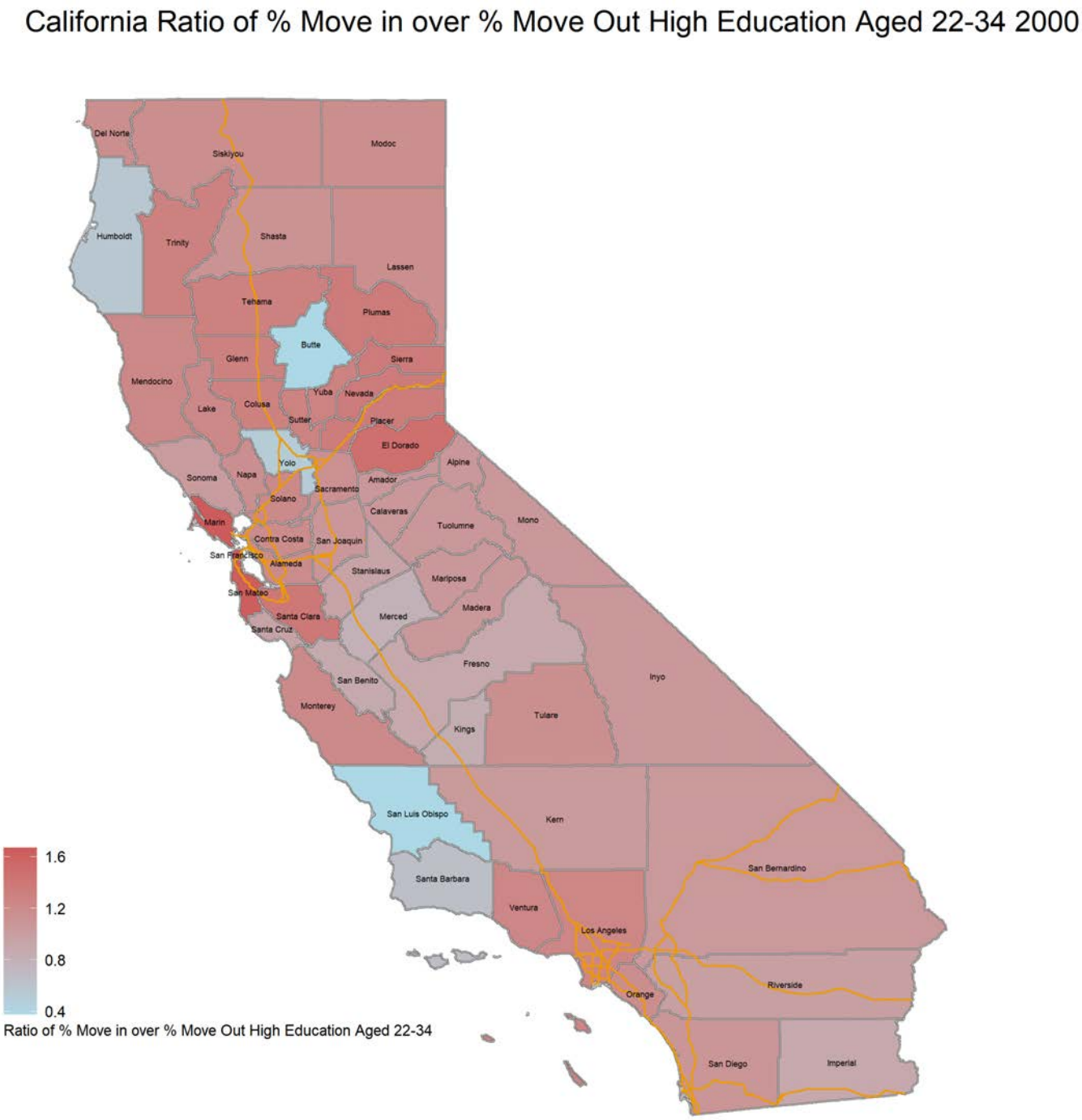

California Ratio of % Move in over % Move Out High Education Aged 22-34 1990
Del Norte
Siskiyou
Modoc
Humboldt
Trinity
Shasta
Lassen
Tehama
Plumas
Butte
Glenn
Sierra
Mendocino
Yuba
Nevada
Lake
Colusa
Sutter
Placer
El Dorado
Yolo
Alpine
Sonoma
Napa
Amador
Sacramento
Solano
Calaveras
Tuolumne
Mono
Marin
Contra Costa
San Joaquin
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
Fresno
Inyo
San Benito
Monterey
Tulare
Kings
San Luis Obispo
Kern
Santa Barbara
San Bernardino
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
1.50
1.25
1.00
0.75
0.50
0.25
Ratio of % Move in over % Move Out High Education Aged 22-34

Figure 2.1


California Ratio of % Move in over % Move Out High Education Aged 22-34 2000
Del Norte
Siskiyou
Modoc
Humboldt
Trinity
Shasta
Lassen
Tehama
Plumas
Butte
Glenn
Sierra
Mendocino
Yuba
Nevada
Lake
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Kern
Santa Barbara
San Bernardino
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
1.6
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0.8
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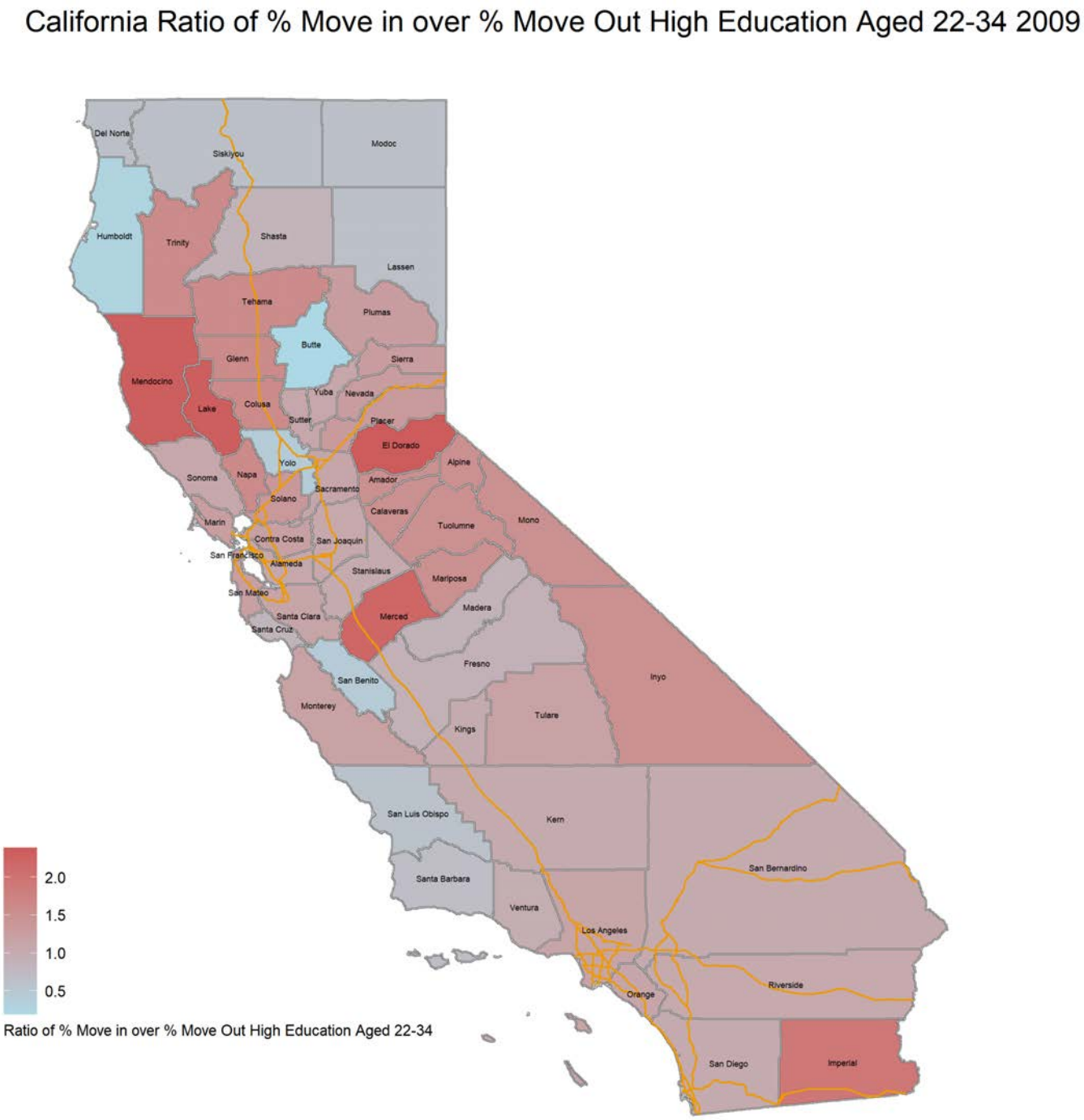
Ratio of % Move in over % Move Out High Education Aged 22-34

Figure 2.2


California Ratio of % Move in over % Move Out High Education Aged 22-34 2009
Del Norte
Siskiyou
Modoc
Humboldt
Trinity
Shasta
Lassen
Tehama
Plumas
Butte
Glenn
Sierra
Mendocino
Yuba
Nevada
Lake
Colusa
Sutter
Placer
El Dorado
Yolo
Alpine
Sonoma
Napa
Amador
Sacramento
Solano
Calaveras
Tuolumne
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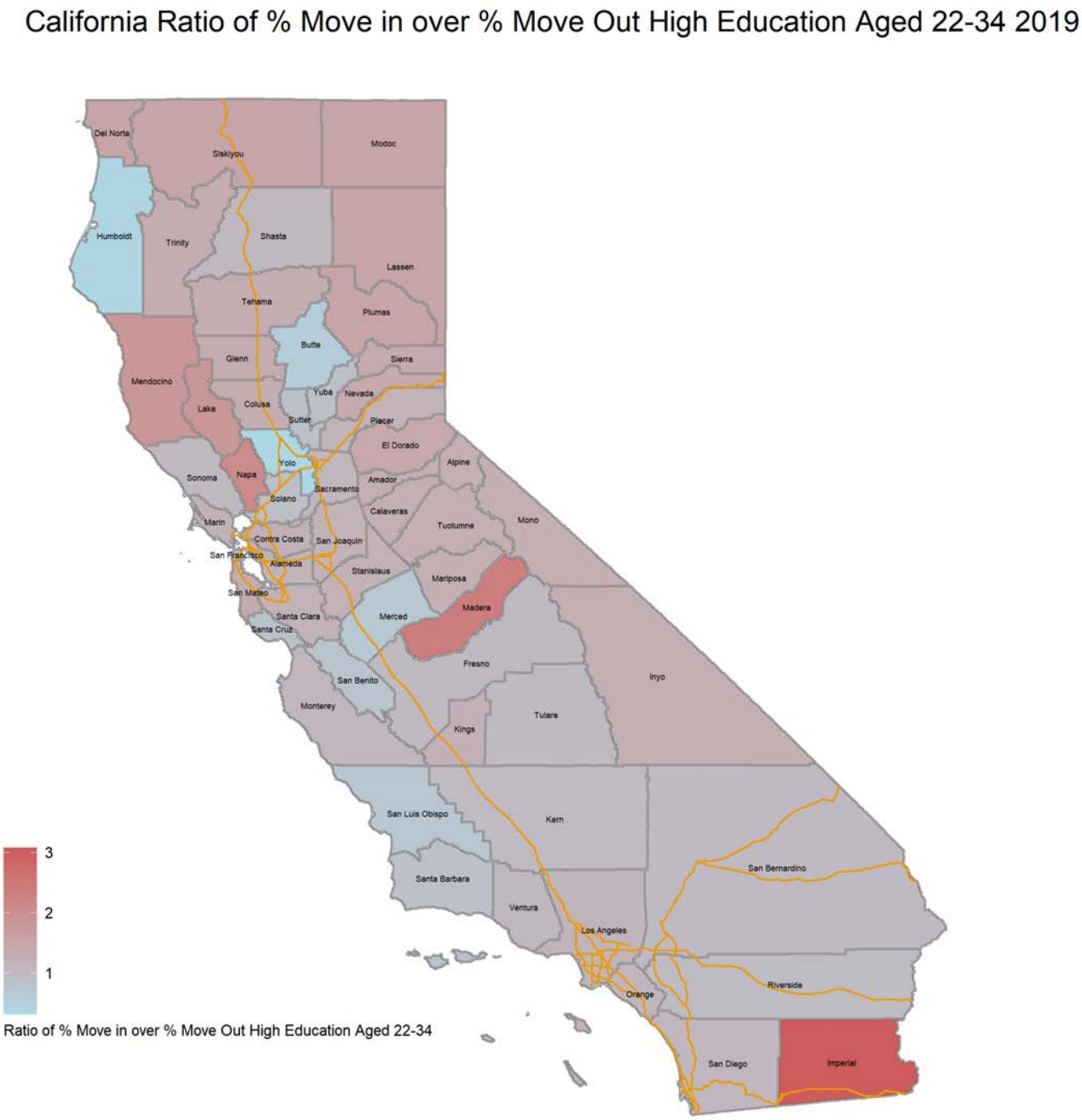
Marin
Contra Costa
San Joaquin
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
Fresno
Inyo
San Benito
Monterey
Tulare
Kings
San Luis Obispo
Kern
Santa Barbara
San Bernardino
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
2.0
1.5
1.0
0.5
Ratio of % Move in over % Move Out High Education Aged 22-34

Figure 2.3


California Ratio of % Move in over % Move Out High Education Aged 22-34 2019
Del Norte
Siskiyou
Modoc
Humboldt
Trinity
Shasta
Lassen
Tehama
Plumas
Butte
Glenn
Sierra
Mendocino
Yuba
Nevada
Lake
Colusa
Sutter
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El Dorado
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Sacramento
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Calaveras
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Contra Costa
San Joaquin
San Francisco
Alameda
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Mariposa
San Mateo
Santa Clara
Merced
Madera
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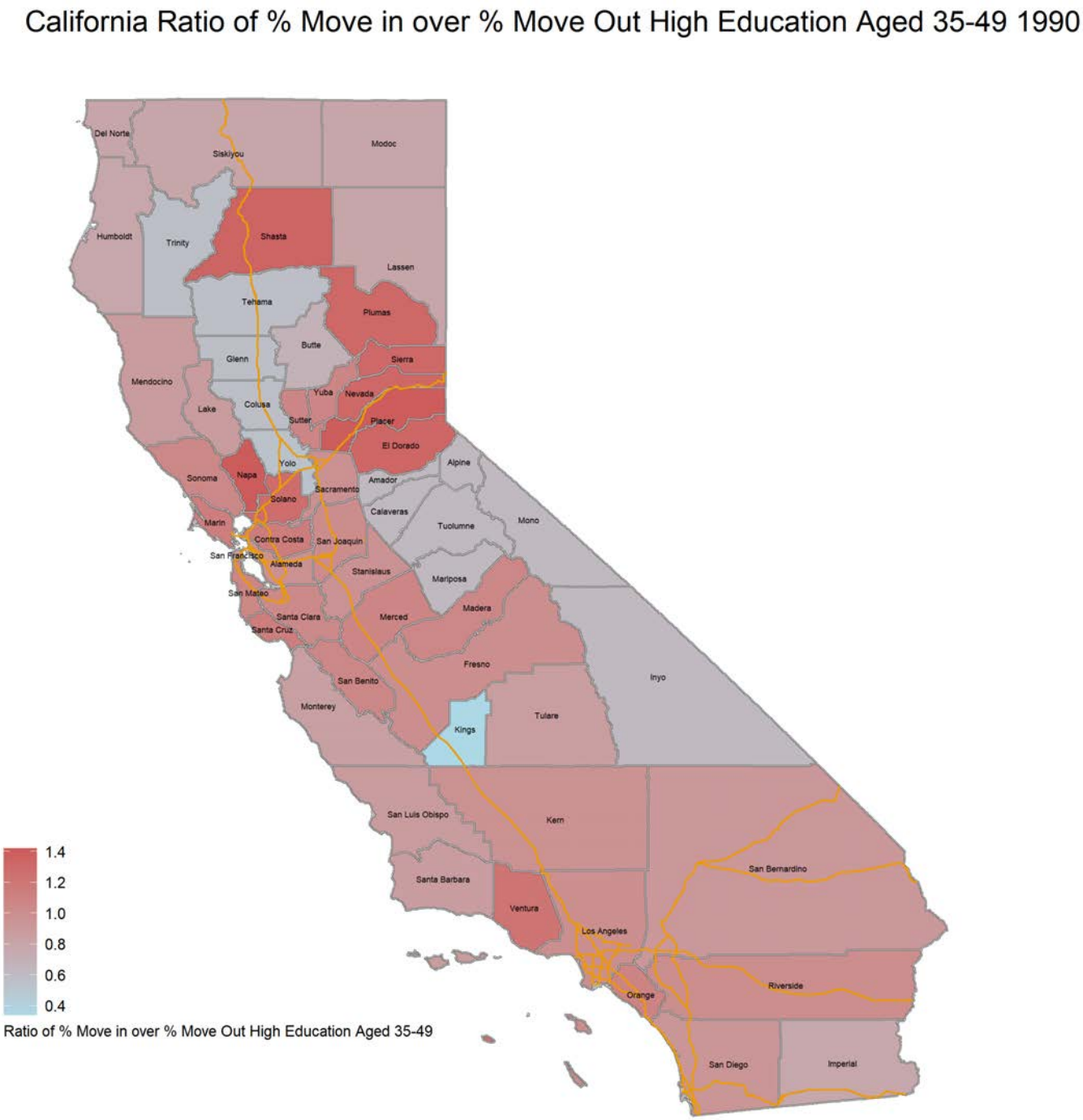
Fresno
Inyo
San Benito
Monterey
Tulare
Kings
San Luis Obispo
Kern
Santa Barbara
San Bernardino
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
3
2
1
Ratio of % Move in over % Move Out High Education Aged 22-34

Figure 2.4

Ratio of highly educated in-movers to out-movers, among 35-49 year olds

The next four maps (Figures 2.5-2.8) show which counties are experiencing more in-movement relative to out-movement of highly educated middle aged adults (aged 35-49 years). On these maps, the blue areas are counties experiencing a relative outflow of young highly educated residents. The key patterns we observe are:

- In the last two decades, San Benito County (just southeast of Monterey Bay) has experienced a relative outflow of middle-aged highly educated residents, in contrast to the inflows they received in the 1980s and 1990s.
- Kings County, in the center of the state, has generally experienced a relative outflow of middle aged highly educated residents (except in the 1990s).
- Whereas several counties in the north of the state tend to experience a relative outflow of middle aged highly educated residents, a strong exception in most decades is Shasta County, which stands out in red in the north of the state in most decades.


California Ratio of % Move in over % Move Out High Education Aged 35-49 1990
Del Norte
Siskiyou
Modoc
Humboldt
Trinity
Shasta
Lassen
Tehama
Plumas
Butte
Glenn
Sierra
Mendocino
Yuba
Nevada
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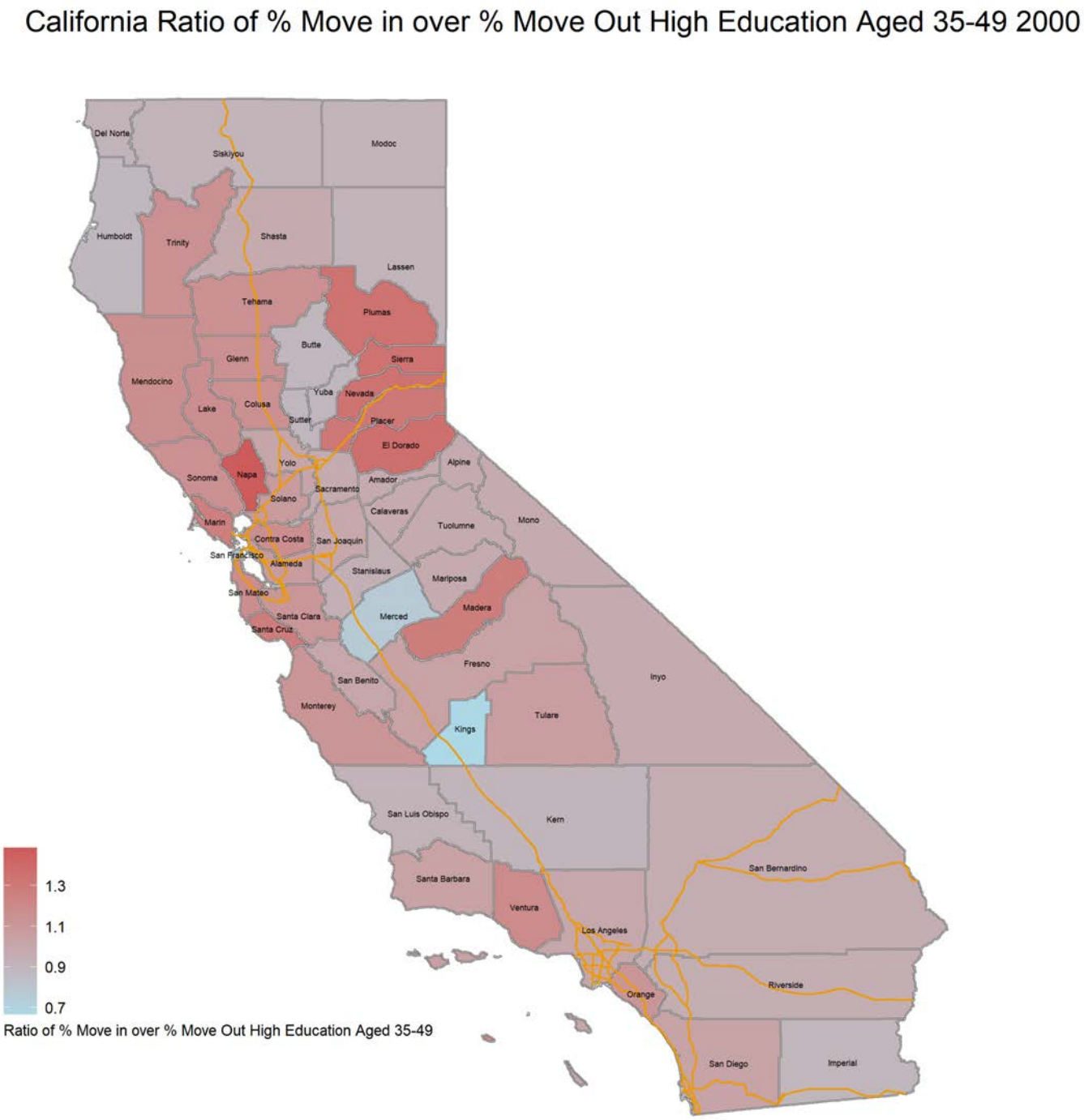
San Benito
Monterey
Tulare
Kings
San Luis Obispo
Kern
Santa Barbara
San Bernardino
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
1.4
1.2
1.0
0.8
0.6
0.4
Ratio of % Move in over % Move Out High Education Aged 35-49

Figure 2.5


California Ratio of % Move in over % Move Out High Education Aged 35-49 2000
Del Norte
Siskiyou
Modoc
Humboldt
Trinity
Shasta
Lassen
Tehama
Plumas
Butte
Glenn
Sierra
Mendocino
Yuba
Nevada
Lake
Colusa
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Mariposa
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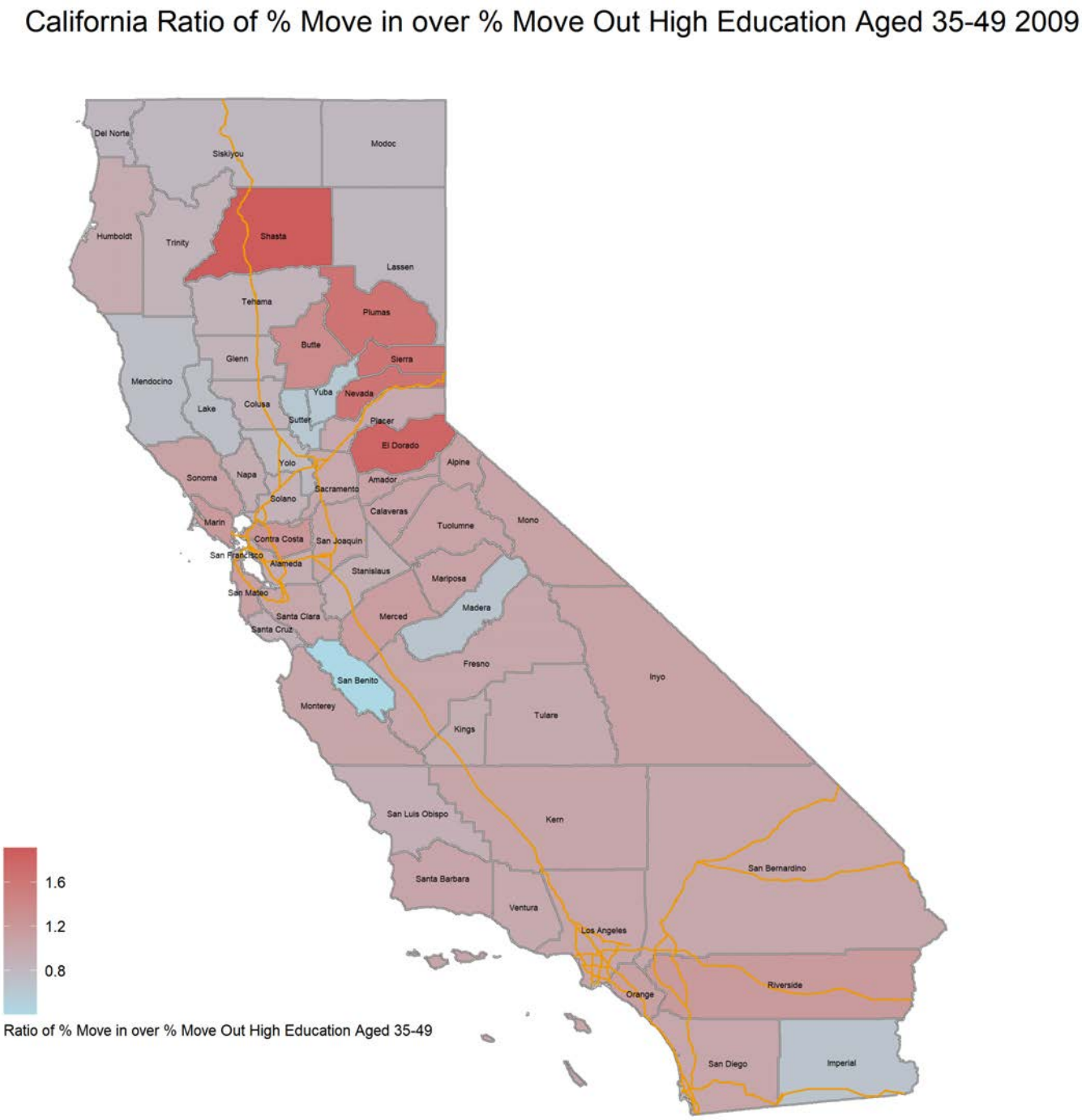
Santa Clara
Merced
Madera
Santa Cruz
Fresno
Inyo
San Benito
Monterey
Tulare
Kings
San Luis Obispo
Kern
Santa Barbara
San Bernardino
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
1.3
1.1
0.9
0.7
Ratio of % Move in over % Move Out High Education Aged 35-49

Figure 2.6


California Ratio of % Move in over % Move Out High Education Aged 35-49 2009
Del Norte
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Humboldt
Trinity
Shasta
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Tehama
Plumas
Butte
Sierra
Glenn
Mendocino
Yuba
Nevada
Lake
Colusa
Sutter
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El Dorado
Yolo
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Sacramento
Solano
Calaveras
Marin
Tuolumne
Mono
Contra Costa
San Joaquin
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
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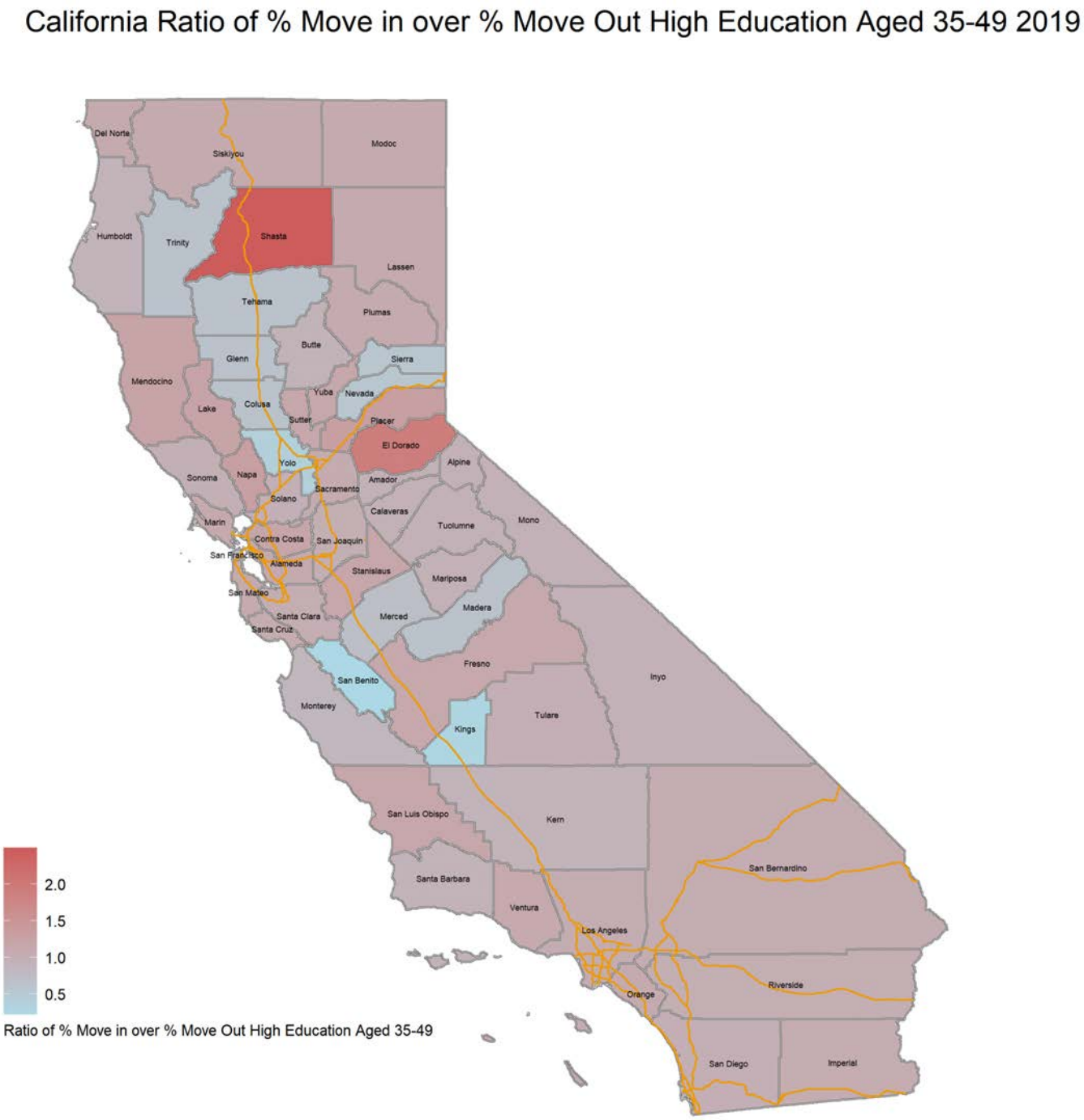
Santa Cruz
Fresno
Inyo
San Benito
Monterey
Tulare
Kings
San Luis Obispo
Kern
Santa Barbara
San Bernardino
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
1.6
1.2
0.8
Ratio of % Move in over % Move Out High Education Aged 35-49

Figure 2.7


California Ratio of % Move in over % Move Out High Education Aged 35-49 2019
Del Norte
Siskiyou
Modoc
Humboldt
Trinity
Shasta
Lassen
Tehama
Plumas
Butte
Glenn
Sierra
Mendocino
Yuba
Nevada
Lake
Colusa
Sutter
Placer
El Dorado
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Fresno
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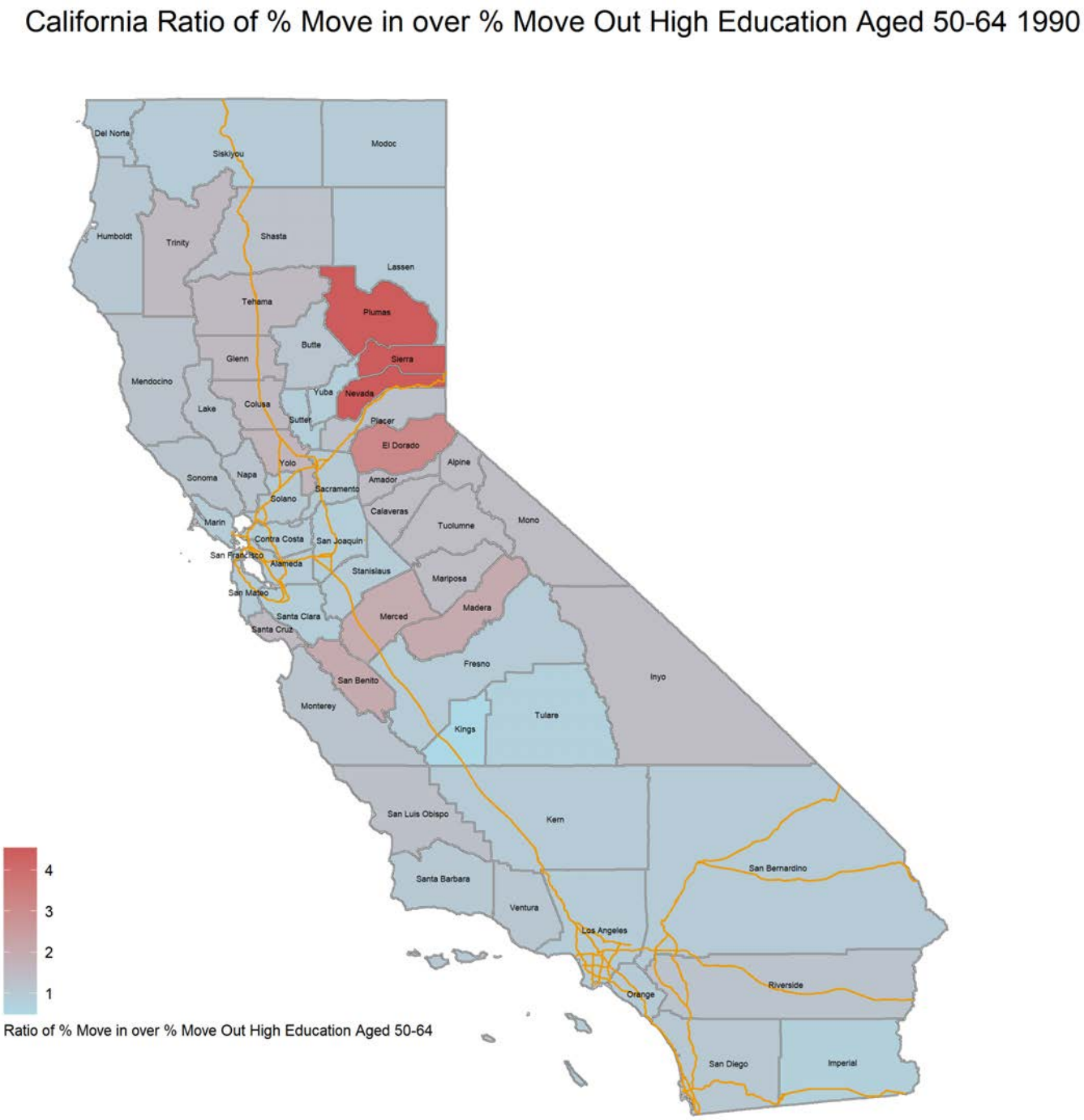
San Benito
Monterey
Tulare
Kings
San Luis Obispo
Kern
Santa Barbara
San Bernardino
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
2.0
1.5
1.0
0.5
Ratio of % Move in over % Move Out High Education Aged 35-49

Figure 2.8

Ratio of highly educated in-movers to out-movers, among 50-64 year olds

In the next four maps (Figures 2.9-2.12), we show which counties are experiencing more in-movement relative to out-movement of highly educated older adults (aged 50-64 years). The key patterns we observe are:

- In the 1980s there was a relatively large in-flow of older highly educated residents into the rural northeastern counties of Plumas, Sierra, and Nevada. These counties continued to receive a somewhat smaller relative in-flow of this group in the following two decades.
- In the 1990s there was a relatively large in-flow of older highly educated residents into the rural counties in the central portion of the eastern part of the state. This flow continued, but at a somewhat smaller relative rate, in the two most recent decades.
- In the 2000s, Mendocino and Lake counties received a relatively large in-flow of older highly educated residents, but this pattern was weaker in the other decades.


California Ratio of % Move in over % Move Out High Education Aged 50-64 1990
Del Norte
Siskiyou
Modoc
Humboldt
Trinity
Shasta
Lassen
Tehama
Plumas
Butte
Glenn
Sierra
Mendocino
Yuba
Nevada
Lake
Colusa
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Placer
El Dorado
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Fresno
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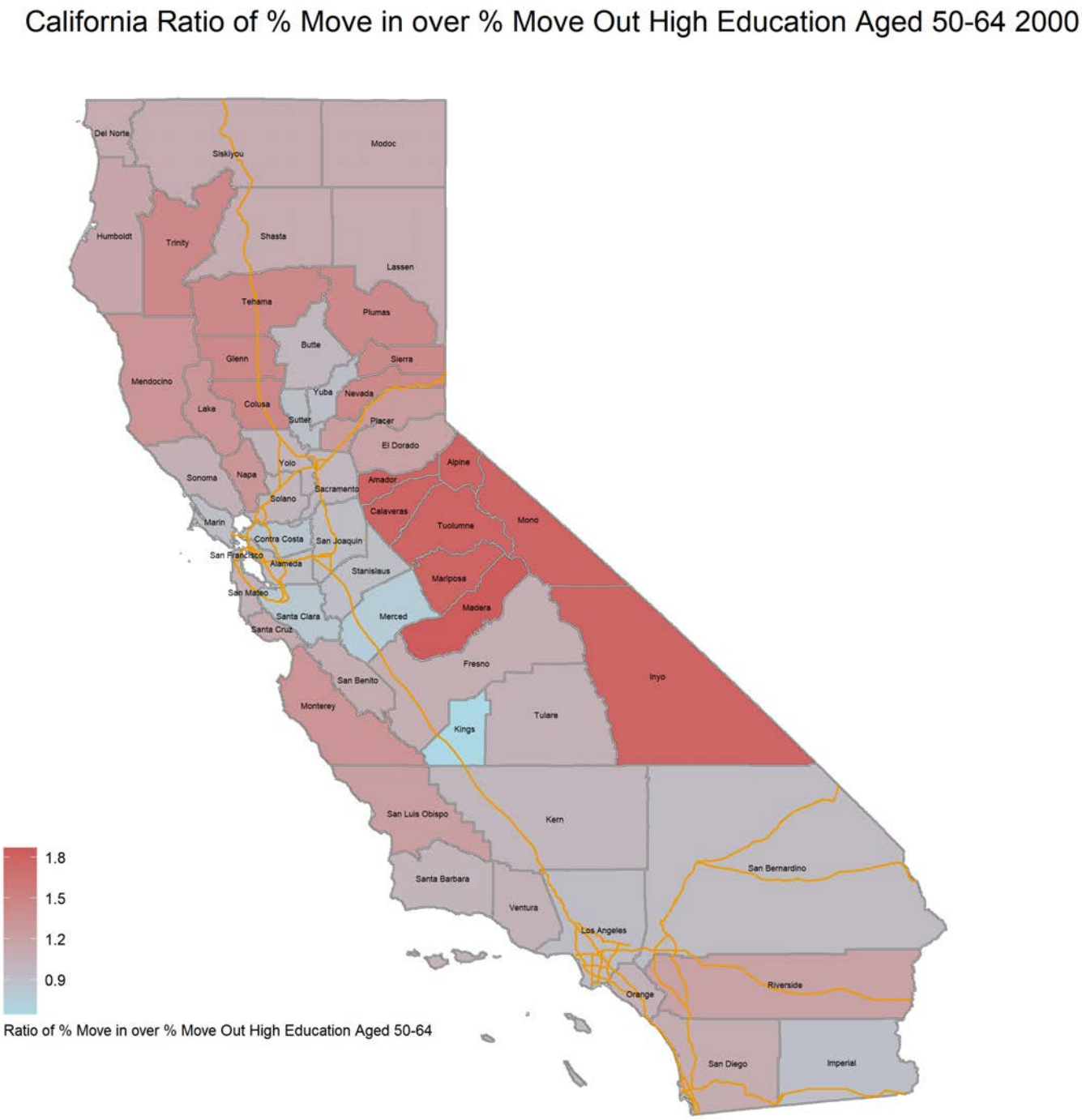
Monterey
Tulare
Kings
San Luis Obispo
Kern
Santa Barbara
San Bernardino
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
4
3
2
1
Ratio of % Move in over % Move Out High Education Aged 50-64

Figure 2.9


California Ratio of % Move in over % Move Out High Education Aged 50-64 2000
Del Norte
Siskiyou
Modoc
Humboldt
Trinity
Shasta
Lassen
Tehama
Plumas
Butte
Glenn
Sierra
Mendocino
Yuba
Nevada
Lake
Colusa
Sutter
Placer
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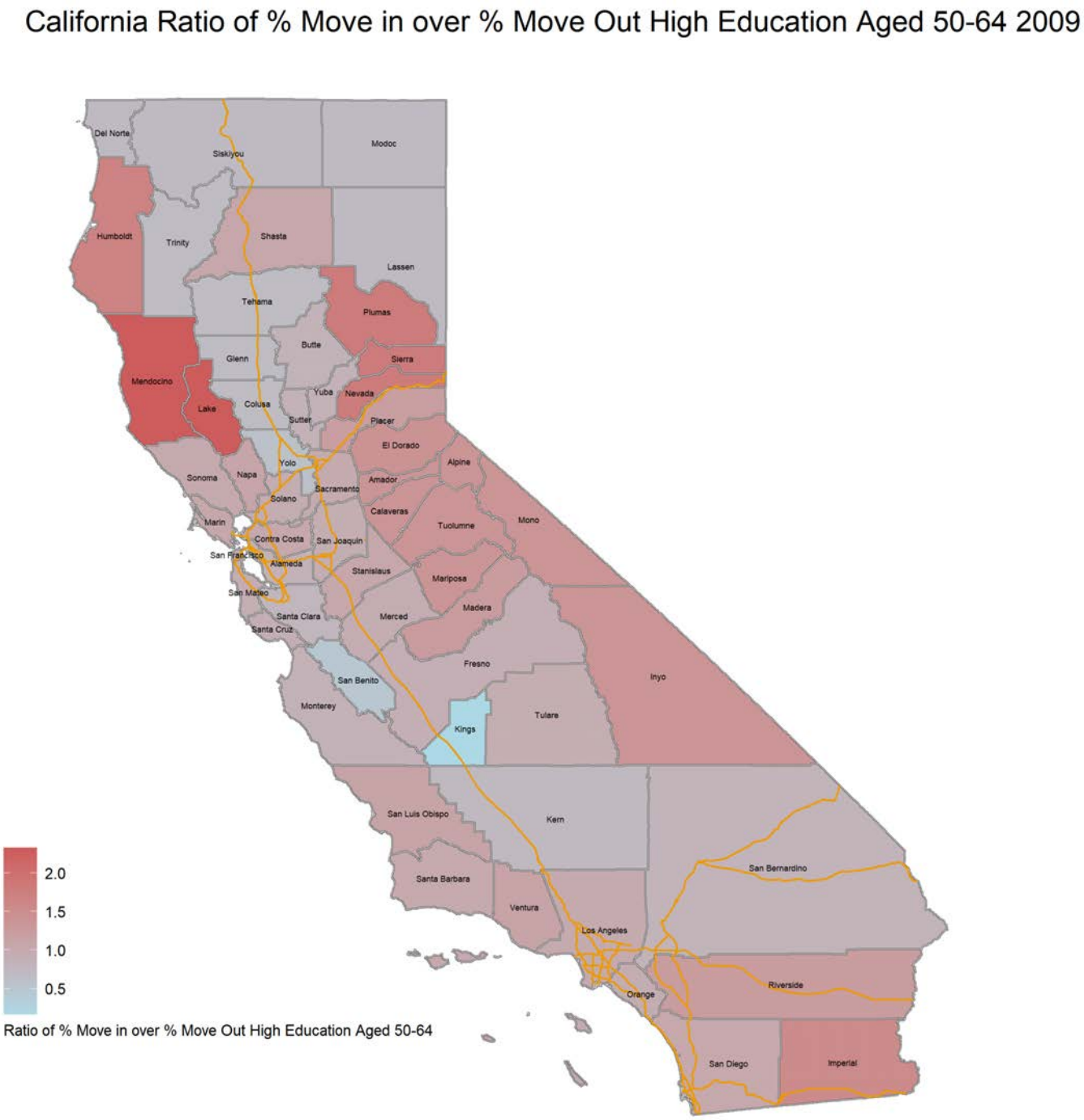
Madera
Santa Cruz
Fresno
Inyo
San Benito
Monterey
Tulare
Kings
San Luis Obispo
Kern
Santa Barbara
San Bernardino
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
1.8
1.5
1.2
0.9
Ratio of % Move in over % Move Out High Education Aged 50-64

Figure 2.10


California Ratio of % Move in over % Move Out High Education Aged 50-64 2009
Del Norte
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Humboldt
Trinity
Shasta
Lassen
Tehama
Plumas
Butte
Glenn
Sierra
Mendocino
Yuba
Nevada
Lake
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Solano
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San Joaquin
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Santa Clara
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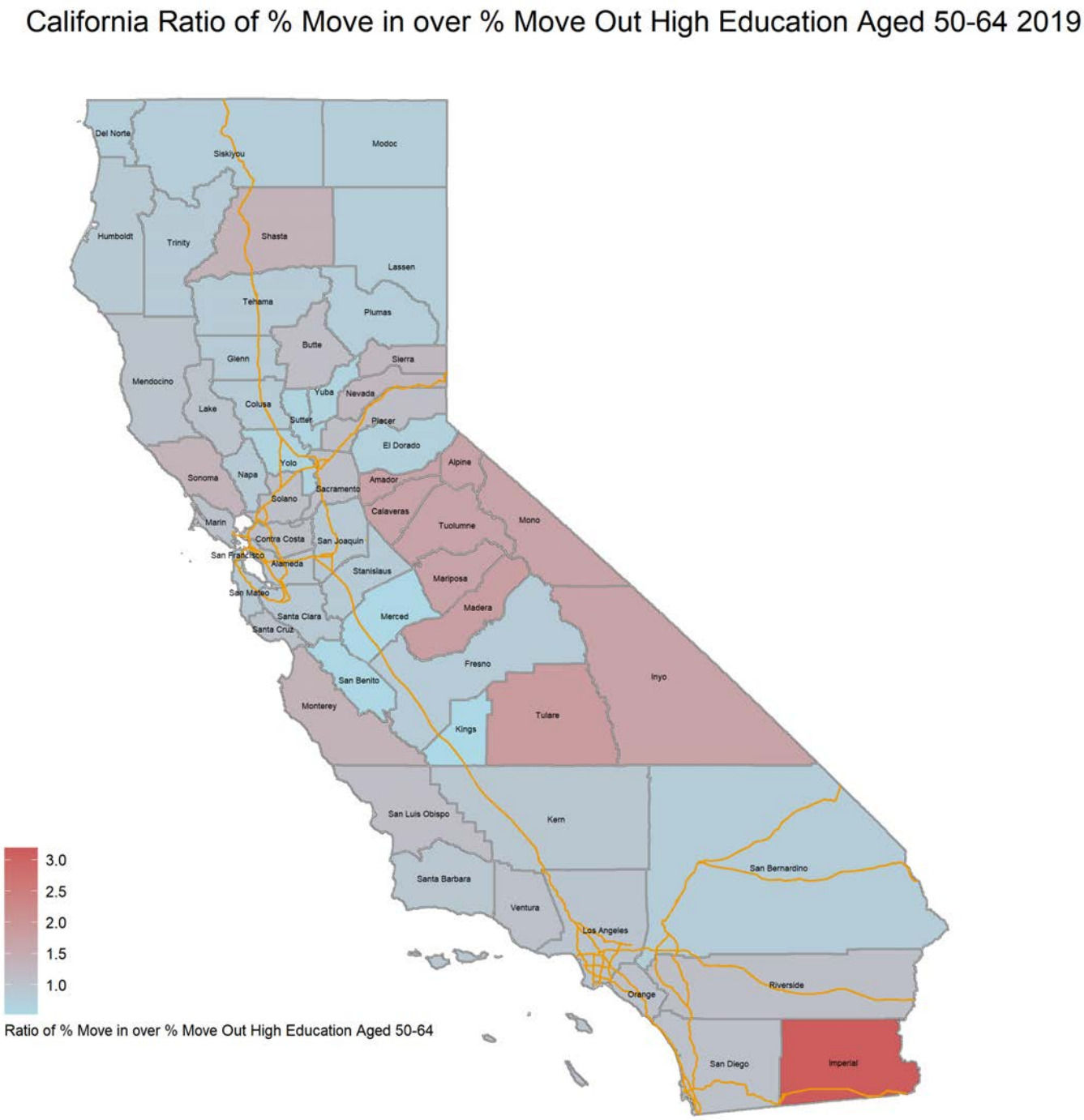
Madera
Santa Cruz
Fresno
Inyo
San Benito
Monterey
Tulare
Kings
San Luis Obispo
Kern
Santa Barbara
San Bernardino
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
2.0
1.5
1.0
0.5
Ratio of % Move in over % Move Out High Education Aged 50-64

Figure 2.11


California Ratio of % Move in over % Move Out High Education Aged 50-64 2019
Del Norte
Siskiyou
Modoc
Humboldt
Trinity
Shasta
Lassen
Tehama
Plumas
Butte
Glenn
Sierra
Mendocino
Yuba
Nevada
Lake
Colusa
Sutter
Placer
El Dorado
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Madera
Santa Cruz
Fresno
Inyo
San Benito
Monterey
Tulare
Kings
San Luis Obispo
Kern
Santa Barbara
San Bernardino
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
3.0
2.5
2.0
1.5
1.0
Ratio of % Move in over % Move Out High Education Aged 50-64

Figure 2.12

Chapter 3
Residential mobility in Southern California Counties

In this chapter, we drill down to the counties in Southern California. We look at migration flows into and out of the counties in the region. We will focus on the flows of highly educated residents based on our three age categories (younger, middle-aged, and older adults). Throughout this chapter we will focus on the ratio of in-movers to out-movers among the highly educated, to get a sense of whether a county is increasing or decreasing for highly educated residents in an age category. Later in this chapter we will also account for the level of education based on the race/ethnicity of the movers. We will present the results in graphs. Given that we measure the ratio of inflows to outflows, in these plots a value of 1 indicates that the proportion of highly educated residents in an age group entering the county is equal to the proportion of highly educated residents in an age group exiting the county. Values greater than 1 indicate that there is a larger in-flow of highly educated residents in the age group, whereas values less than 1 indicate that there is a larger out-flow of highly educated residents in the age group.

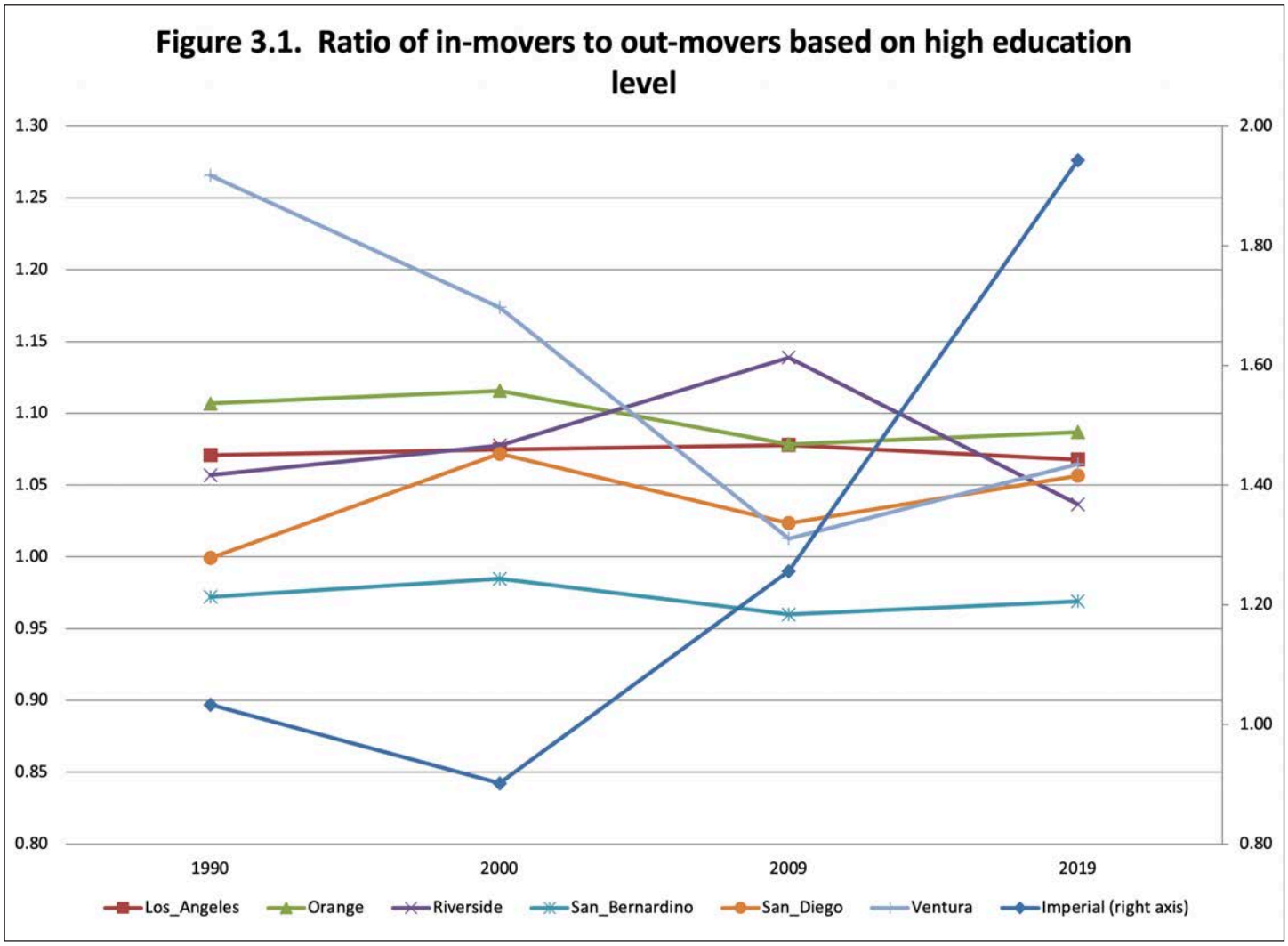


Figure 3.1

In Figure 3.1 we plot the changes in education regardless of the age group of movers. The key findings are the following:

- In the 1980s and 1990s Ventura County was getting a much larger influx of highly educated residents compared to those leaving. But during the 2000s and 2010s the ratio was near the region average.
- In the 1980s and 1990s Imperial County was seeing an equal inflow and outflow of highly educated residents. But during the 2000s, and especially during the 2010s, they have received a much larger proportion of highly educated residents.
- Orange County has consistently experienced more incoming highly educated residents than those leaving.
- San Bernardino County has consistently experienced more outgoing than incoming highly educated residents.
- Riverside County experienced a large influx of highly educated residents during the 2000s, but otherwise has had an equal proportion of in-movers and out-movers.

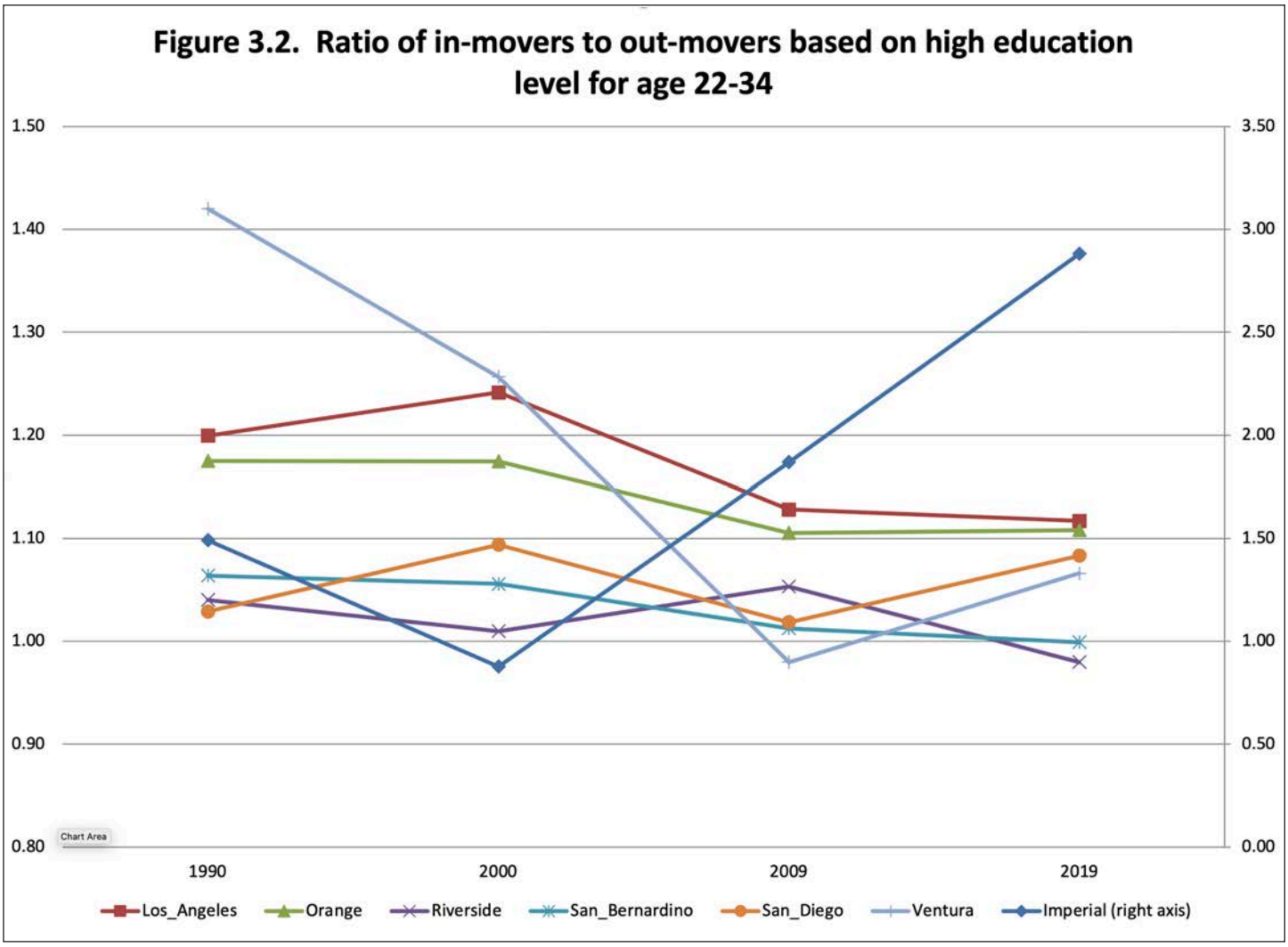


Figure 3.2

In the graph of Figure 3.2, we focus on the relative inflow of young highly educated residents (those aged 22-34). We see that:

- In the 1980s and 1990s Ventura County was getting a much larger influx of young highly educated residents compared to those leaving. But during the 2000s and 2010s the ratio was near the region average.
- In the 1980s and 1990s Imperial County was seeing an equal inflow and outflow of young highly educated residents. But during the 2000s, and especially during the 2010s, they have received a very large proportion of young highly educated residents.
- Orange County has consistently experienced more incoming young highly educated residents than those leaving, although this ratio has fallen somewhat in the two most recent decades.
- Los Angeles County has consistently experienced relatively more incoming than outgoing young highly educated residents, at some of the highest levels in the region.

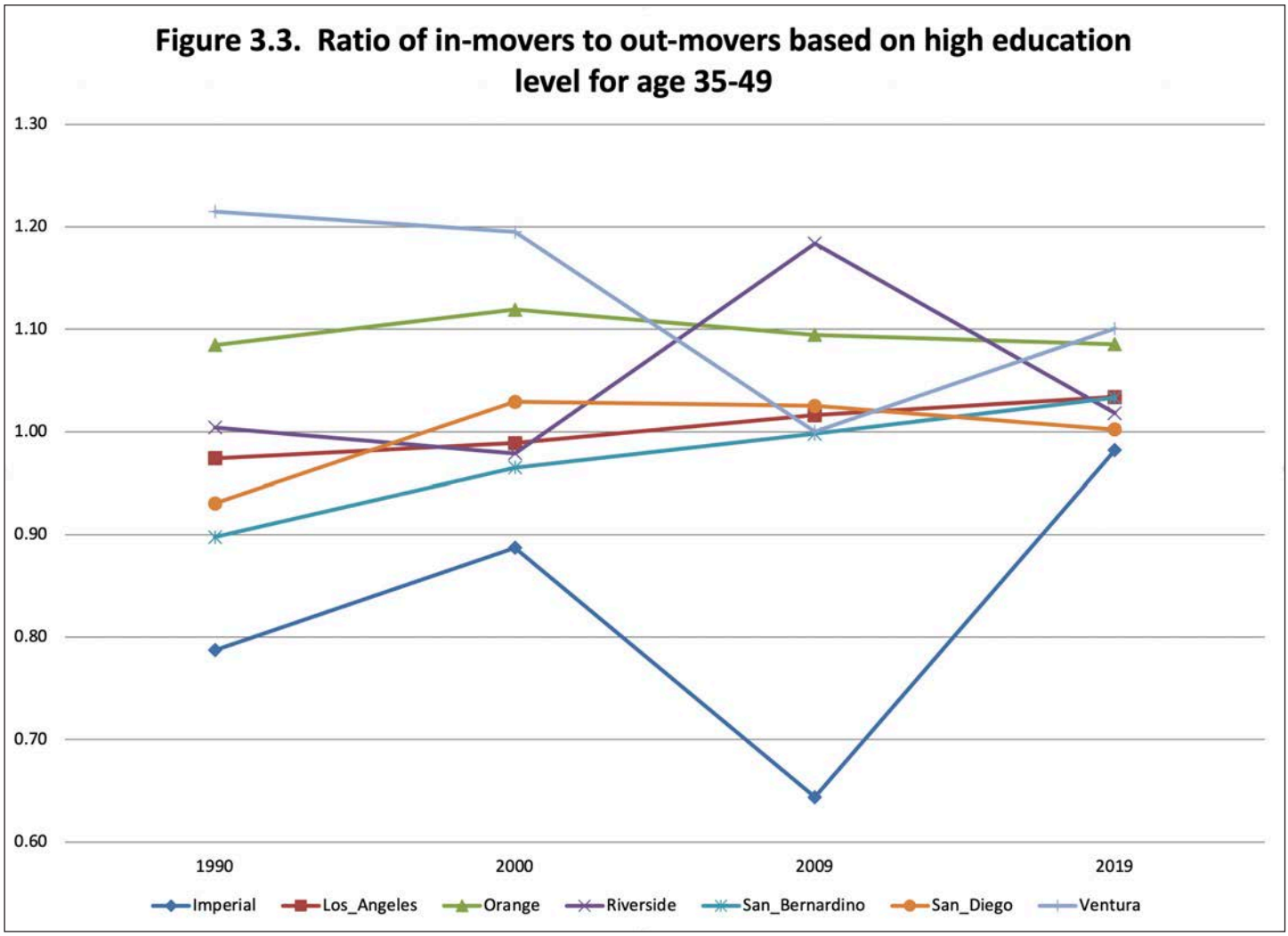


Figure 3.3

The graph in Figure 3.3 shows the relative inflow of middle aged highly educated residents (aged 35-49). We see here that:

- In the 1980s and 1990s Ventura County was getting a much larger influx of middle aged highly educated residents compared to those leaving. During the 2000s the ratio was near the region average, but they saw an uptick in the 2010s.
- Orange County has consistently experienced more incoming middle aged highly educated residents than those leaving.
- Although Riverside has generally been at the region average, during the 2000s they experienced a large relative inflow of middle aged highly educated residents.
- Although San Bernardino experienced a relative outflow of middle aged highly educated residents during the 1980s, the balance has consistently improved since then and now the inflow is slightly larger than the outflow.
- Imperial County generally experiences a larger outflow than inflow of middle aged highly educated residents, except for the most recent decade.

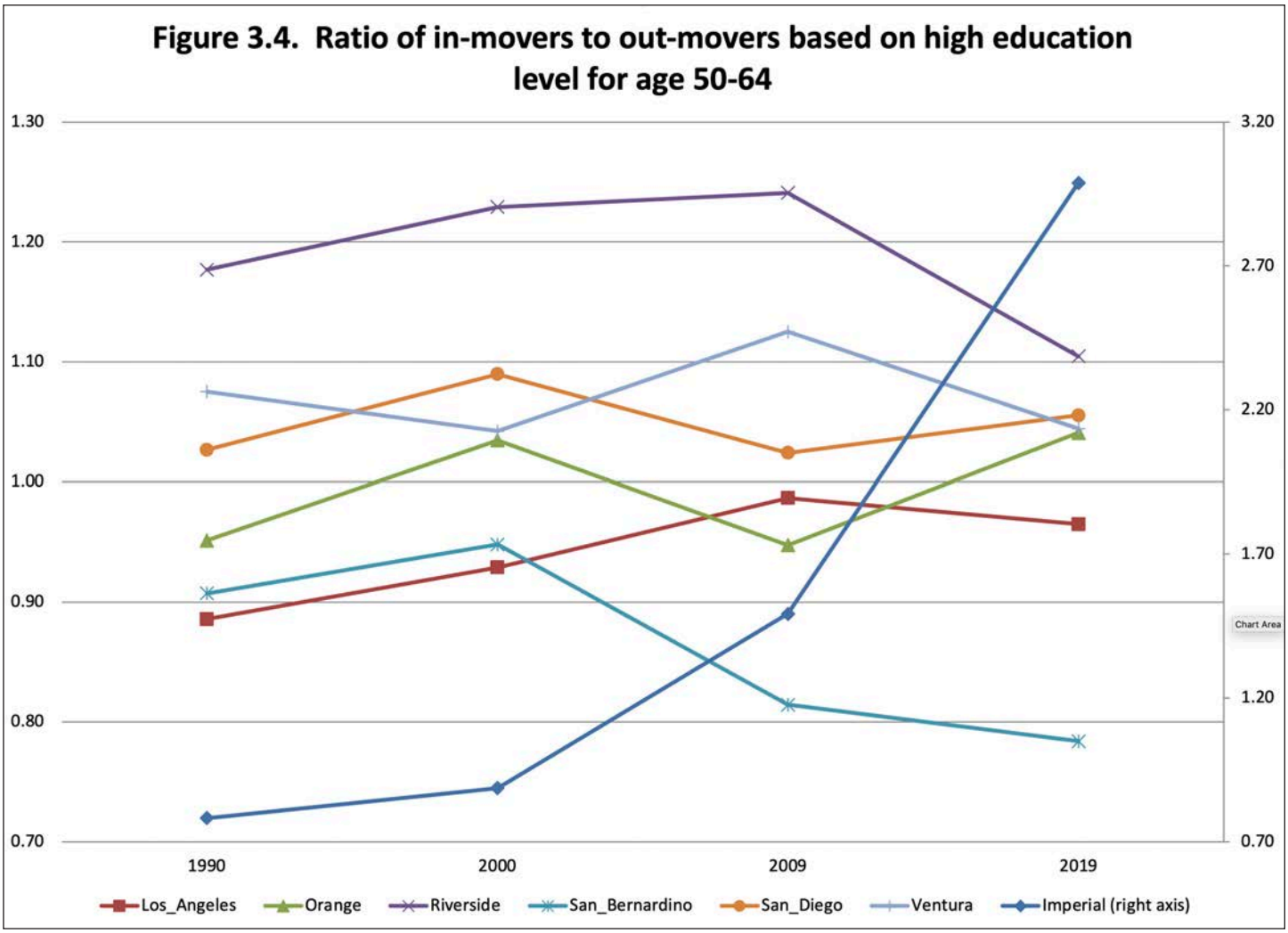


Figure 3.4

Figure 3.4 focuses on the relative inflow of older highly educated residents (aged 50-64). The key patterns here are:

- Riverside has consistently received the largest inflow of older highly educated residents compared to the rest of the region.
- San Diego and Ventura Counties have consistently received a larger inflow to outflow of older highly educated residents.
- Although Los Angeles County has experienced a relative outflow of older highly educated residents, this has improved in recent decades.
- In the 1980s and 1990s Imperial County was seeing a relative outflow of older highly educated residents. But during the 2000s, and especially during the 2010s, they have received a very large proportion of older highly educated residents.

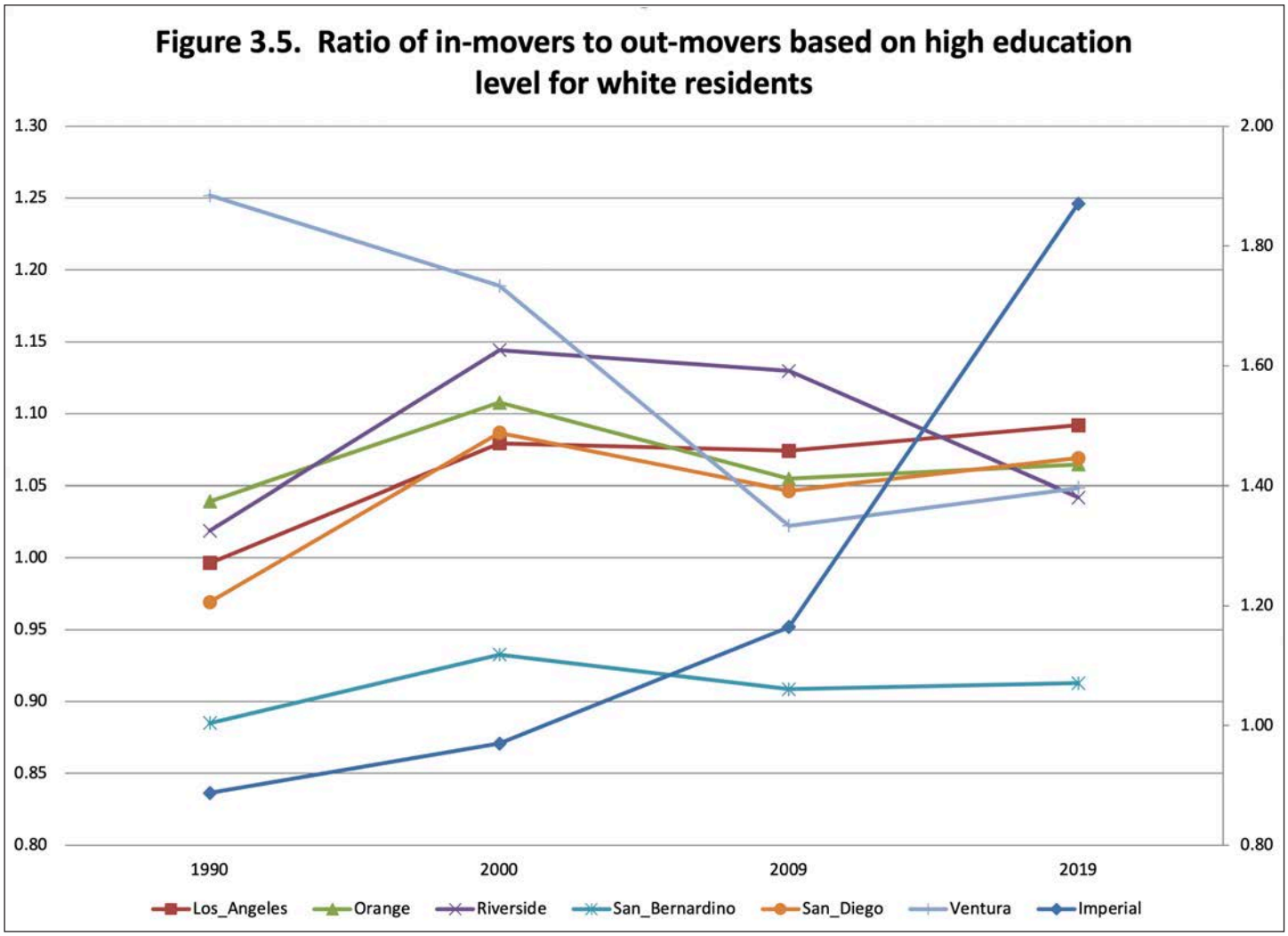


Figure 3.5

In this section we look at the relative in-mobility of highly educated residents based on race/ethnicity. We will distinguish between residents identifying as White, Black, Asian, or Latino. The graph in Figure 3.5 shows the relative inflow of White highly educated residents. The key findings are:

- During the 1980s and 1990s Ventura County experienced a large relative inflow of White highly educated residents. But this relative inflow is much smaller in the two most recent decades.
- Riverside County experienced a relatively large inflow of White highly educated residents in the 1990s and 2000s, but not in the other decades.
- San Bernardino County has consistently experienced a relative outflow of White highly educated residents.
- During the 2000s, and especially during the 2010s, Imperial County has experienced a relatively large inflow of White highly educated residents.

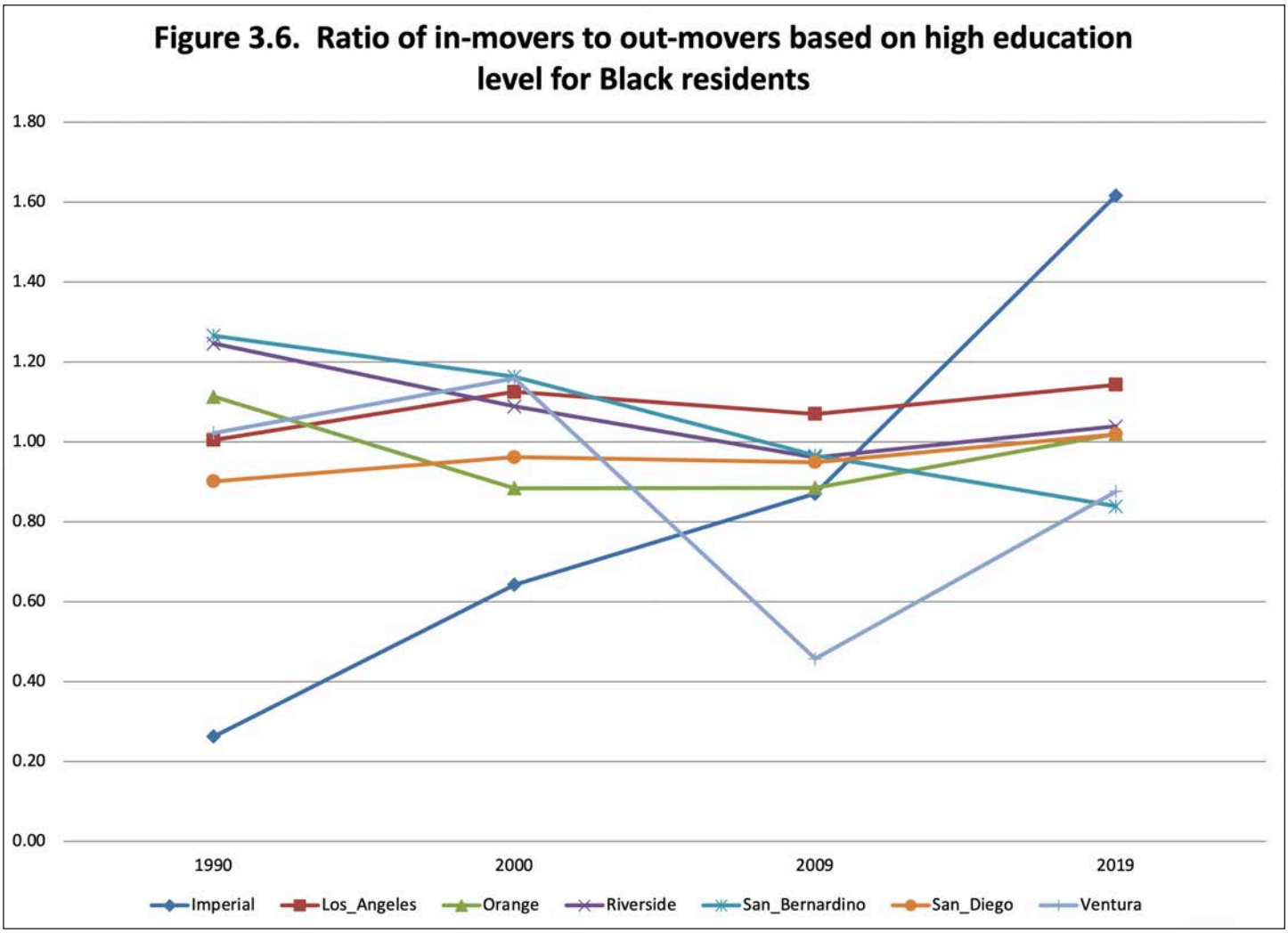


Figure 3.6

Figure 3.6 shows the relative inflow of Black highly educated residents. This graph shows that:

- Although Orange County experienced a relative inflow of Black highly educated residents during the 1980s, they experienced a relative outflow during the 1990s and 2000s.
- Until the most recent decade, San Diego County experienced a relative outflow of Black highly educated residents.
- Ventura County experienced a relative inflow of Black highly educated residents during the 1990s, but a relative outflow during the last two decades.
- Riverside and San Bernardino Counties experienced relative inflows of Black highly educated residents during the 1980s and 1990s but that has diminished more recently.
- Los Angeles County has experienced a relative inflow of Black highly educated residents in recent decades.
- Whereas Imperial County experienced relative outflows of Black highly educated residents in earlier decades during the 2010s they experienced a relatively large inflow.

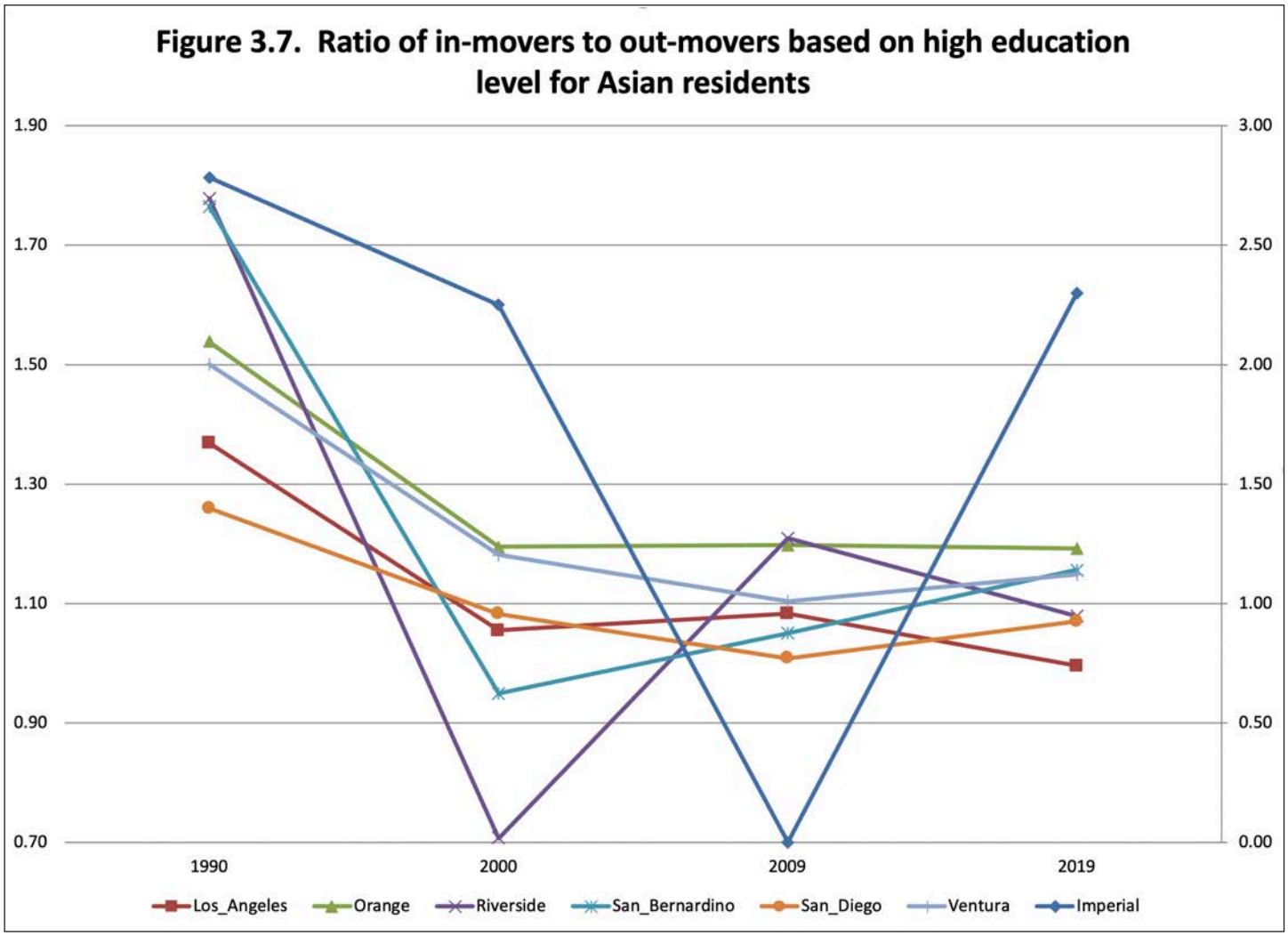


Figure 3.7

The graph in Figure 3.7 shows the relative inflow of Asian highly educated residents. The key findings are:

- Except for the 2000s, when they experienced a large relative outflow, Imperial County has consistently received a large relative inflow of Asian highly educated residents.
- The Inland Empire—Riverside and San Bernardino Counties—experienced a large relative inflow of highly educated Asian residents in the 1980s, a large relative outflow in the 1990s, and a modest relative inflow in the 2000s.
- Orange County has consistently experienced one of the largest relative inflows of Asian highly educated residents over time.
- Los Angeles and San Diego Counties tend to experience a relative inflow of Asian highly educated residents, although this has weakened in recent decades.
- Except for the 2000s Imperial County experiences relative inflows of Asian highly educated residents.

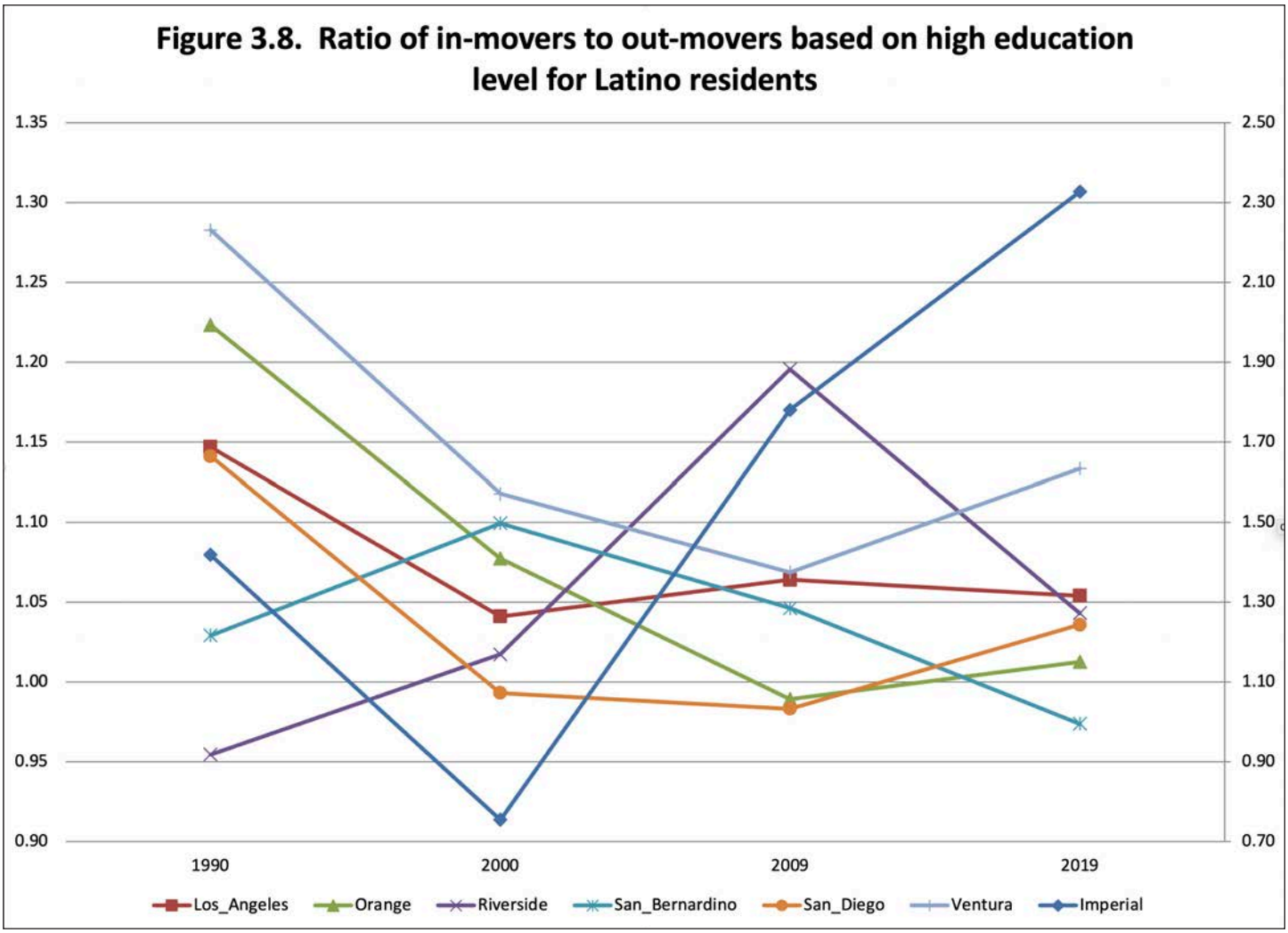


Figure 3.8

The final graph in this chapter (Figure 3.8) shows the relative inflow of Latino highly educated residents.

- Ventura County has consistently experienced one of the largest relative inflows of Latino highly educated residents over time.
- Although Orange County experienced relative inflows of Latino highly educated residents in the 1980s and 1990s, this has not been the case in the two most recent decades.
- Los Angeles County has consistently experienced relative inflows of Latino highly educated residents, and this was strongest in the 1980s.
- San Diego County experienced a relative inflow of Latino highly educated residents in the 1980s, but not since then.
- San Bernardino County experienced a relative inflow of Latino highly educated residents in the 1990s.
- Imperial County has experienced a large relative inflow of Latino highly educated residents in the 2000s and 2010s.

Chapter 4:
Residential mobility to Southern California neighborhoods

In this chapter, we drill down to smaller geographic units in Southern California for studying these migration flows. Whereas the prior chapters looked at flows between counties, in this chapter we look at flows between geographic units that are public use microdata areas (PUMAs). This is a Census-defined unit, and they will have at least 100,000 persons, and will typically be constrained to a single city (in the case of bigger cities). So, for example, a city like Irvine with a little over 200,000 residents has two PUMAs in 2010. We focus on the PUMAs within each county one at a time: 1) Los Angeles; 2) Orange; 3) San Diego. We do not show the other counties (Imperial Riverside, San Bernardino, and Ventura) as they are not large enough to have enough PUMAs to present meaningful maps.

One challenge with using PUMAs is that while they provide us an accurate snapshot of the types of people moving into the PUMA, the Census information about where they are moving is spatially obscured (for privacy reasons). Specially, the Census provides information on where households move in larger units (MIG-PUMAs). These typically have at least 250,000 people. As a consequence, when we look at who leaves a location we only know which MIG-PUMA they are in, but not their PUMA. Therefore, in this chapter it is not feasible for us to compute the ratio of in-movers to out-movers of highly educated residents. Instead, we focus on which PUMAs are receiving a relatively high in-flow of highly educated residents.

Rather than simply mapping the percentage of highly educated residents moving into a PUMA, we standardize this value to make the maps more interpretable. Specifically, we divide the percentage of highly educated residents moving into a PUMA by the average moving into all PUMAs in the specific county. Therefore, in these maps, a PUMA with a value of 1 indicates that the inflow of highly educated residents is equal to the average PUMA in the county. Values greater than 1 indicate that these PUMAs are receiving more highly educated residents than the average in the county (and are shown in red in the maps), whereas those with values less than 1 are experiencing relatively fewer highly educated residents moving in compared to the county average.

Los Angeles County

Age 22-34

The next four maps (Figures 4.1-4.4) show where in Los Angeles County young (age 22-34) highly educated persons are moving during the 1980s, 1990s, 2000s, and 2010s. Across all four decades, areas along the coast, as well as in Pasadena, are experiencing the largest in-movement of young highly educated persons. There is mounting evidence during the 2010s of movement of young highly educated residents into areas closer to downtown.

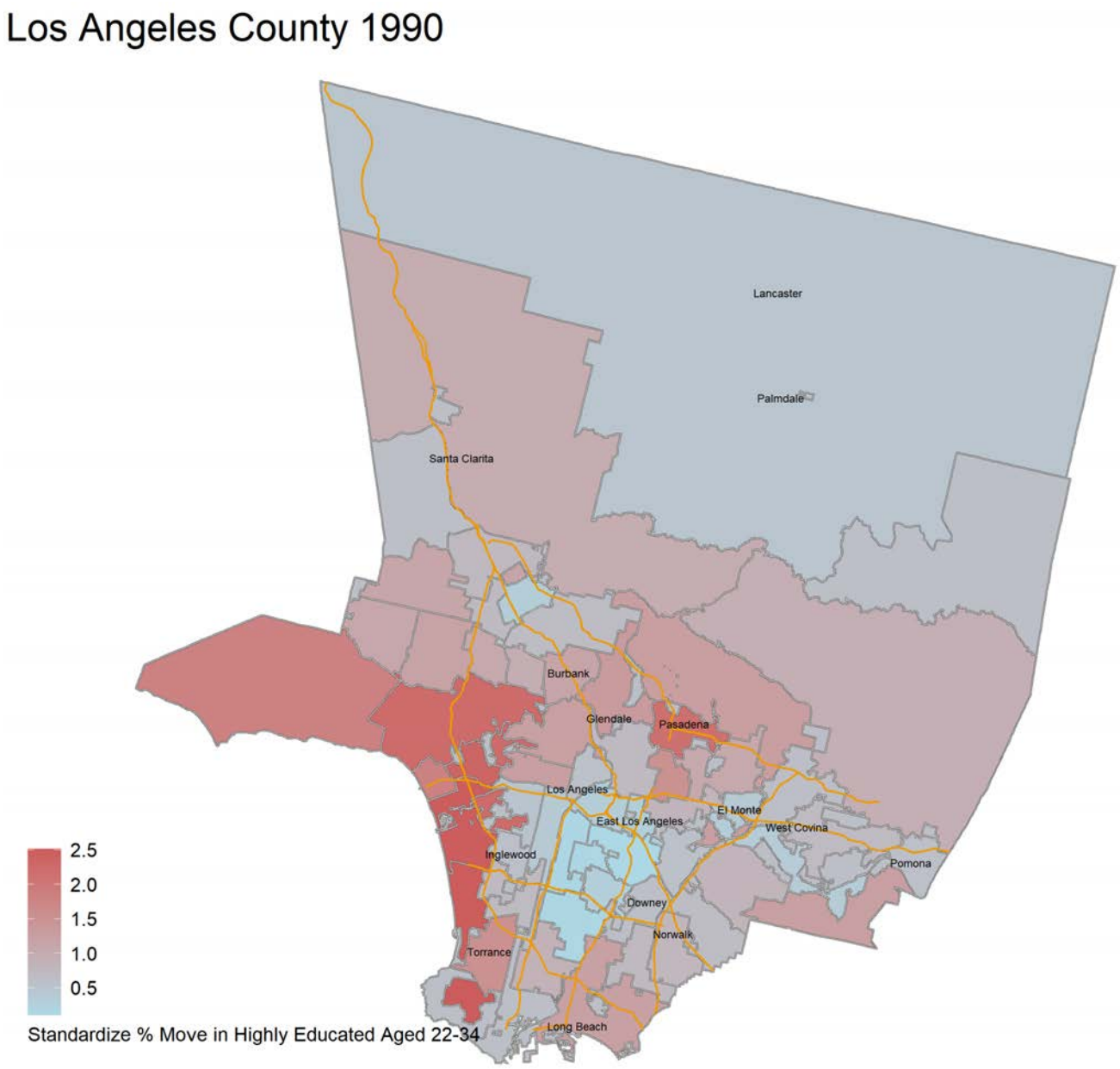


Figure 4.1 Ratio of in-movers to out-movers of highly educated 22-34 year olds in Los Angeles County PUMAs, 1990

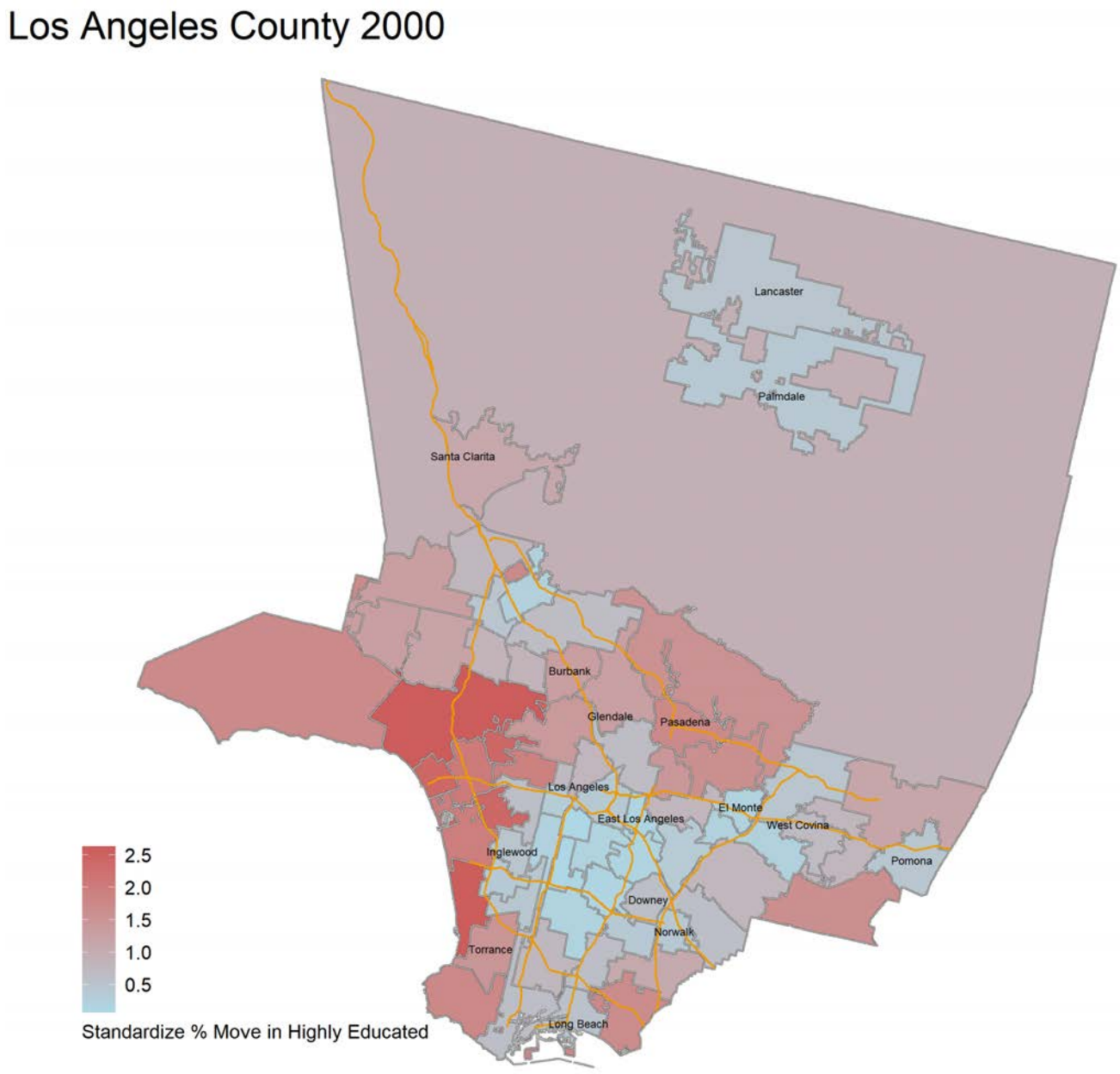


Figure 4.2 Ratio of in-movers to out-movers of highly educated 22-34 year olds in Los Angeles County PUMAs, 2000

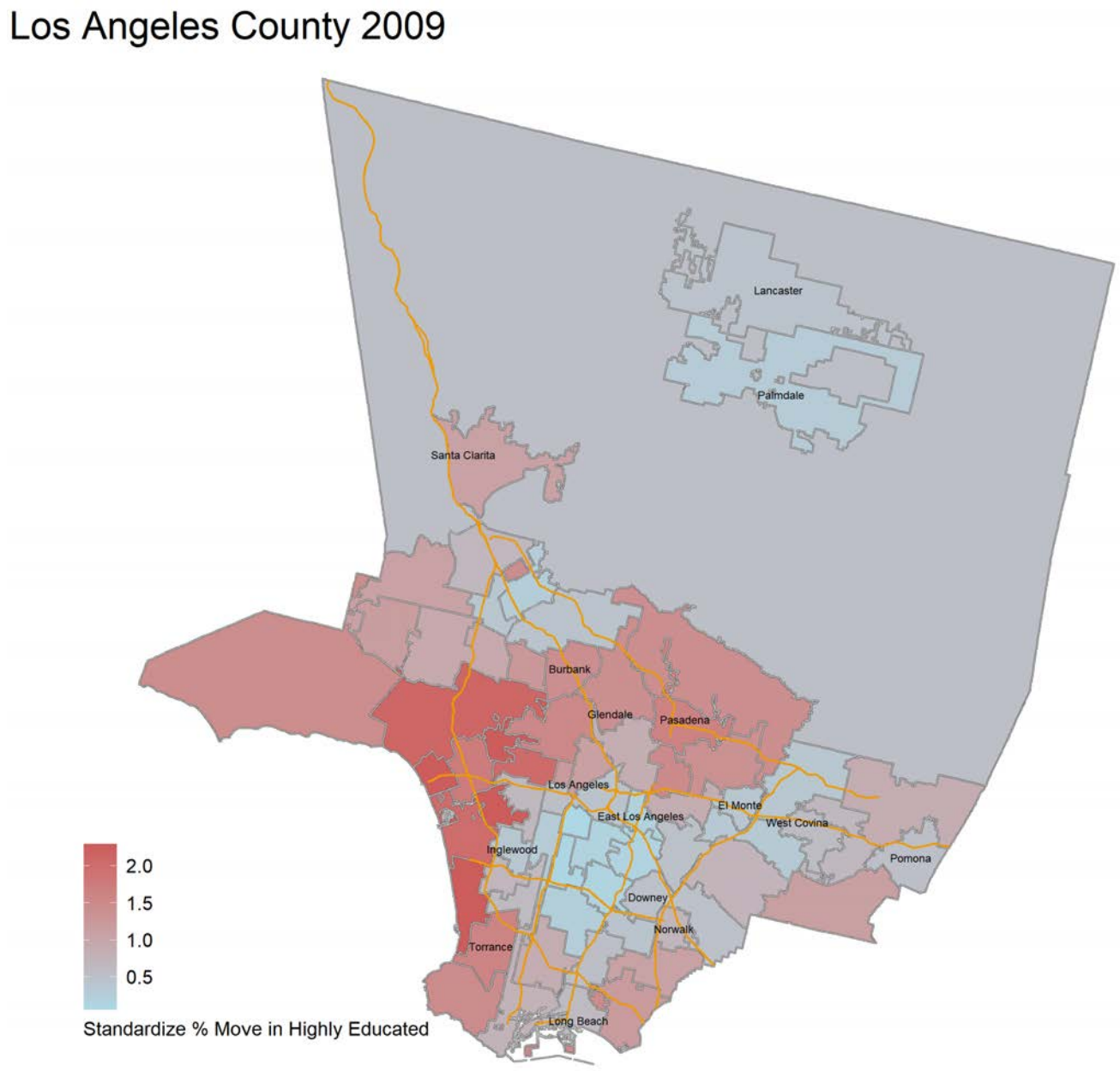


Figure 4.3 Ratio of in-movers to out-movers of highly educated 22-34 year olds in Los Angeles County PUMAs, 2009

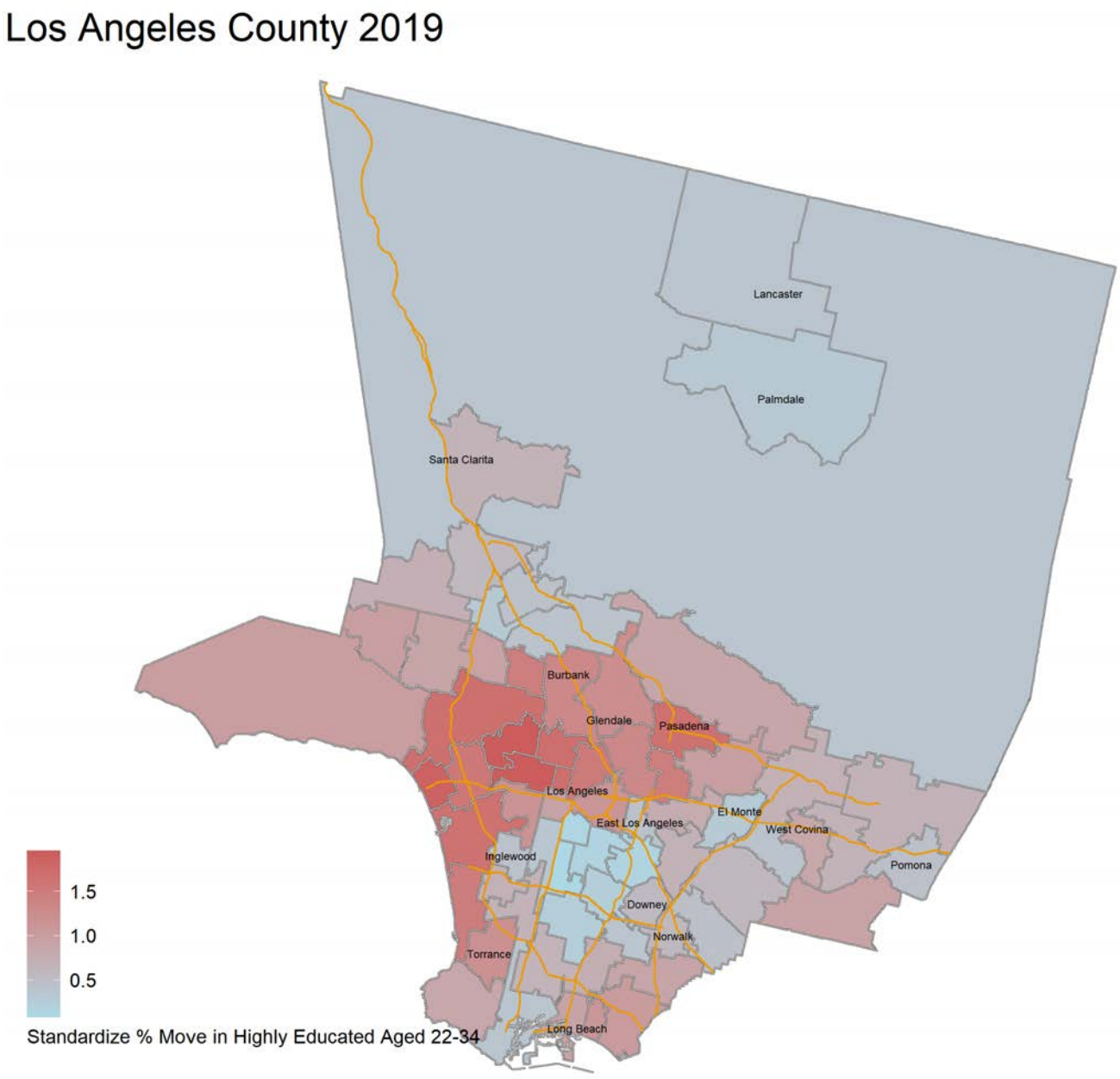


Figure 4.4 Ratio of in-movers to out-movers of highly educated 22-34 year olds in Los Angeles County PUMAs, 2019

Los Angeles County

Age 35-49

These next four maps (Figures 4.5-4.8) show where in Los Angeles County middle-aged (age 35-49) highly educated persons are moving during the 1980s, 1990s, 2000s, and 2010s. In the 1980s, the biggest relative inflow was to the western-most portion, including Malibu and Pacific Palisades. The South Bay area (including Palos Verdes) began receiving a particularly large relative inflow of this group in the 1990s, and that has continued since then. The area north of Pasadena (north Pasadena, Altadena, La Canada-Flintridge) began receiving a relatively large inflow of this group in the 1990s, and particularly in the last two decades.

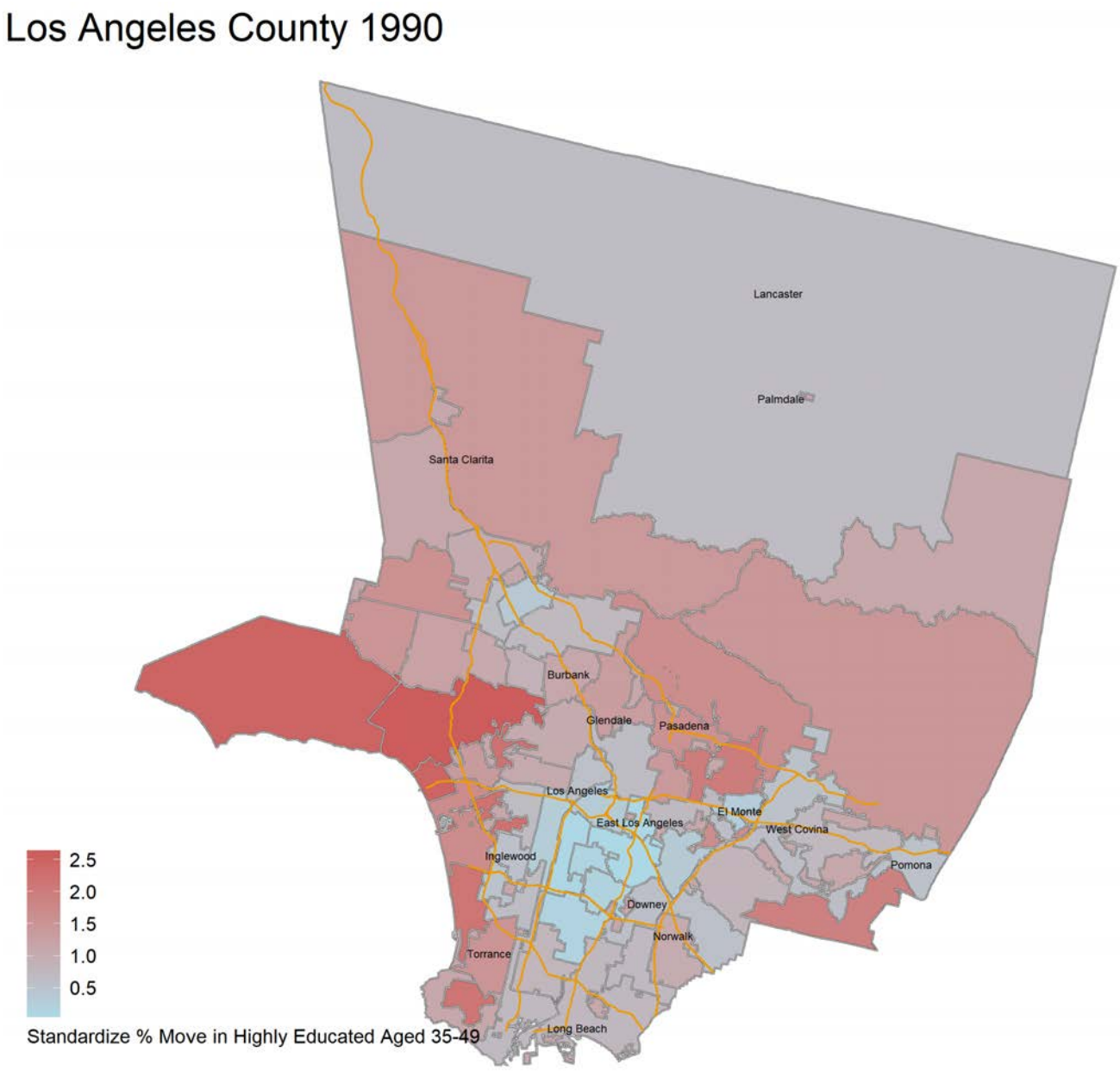


Figure 4.5 Ratio of in-movers to out-movers of highly educated 35-49 year olds in Los Angeles County PUMAs, 1990

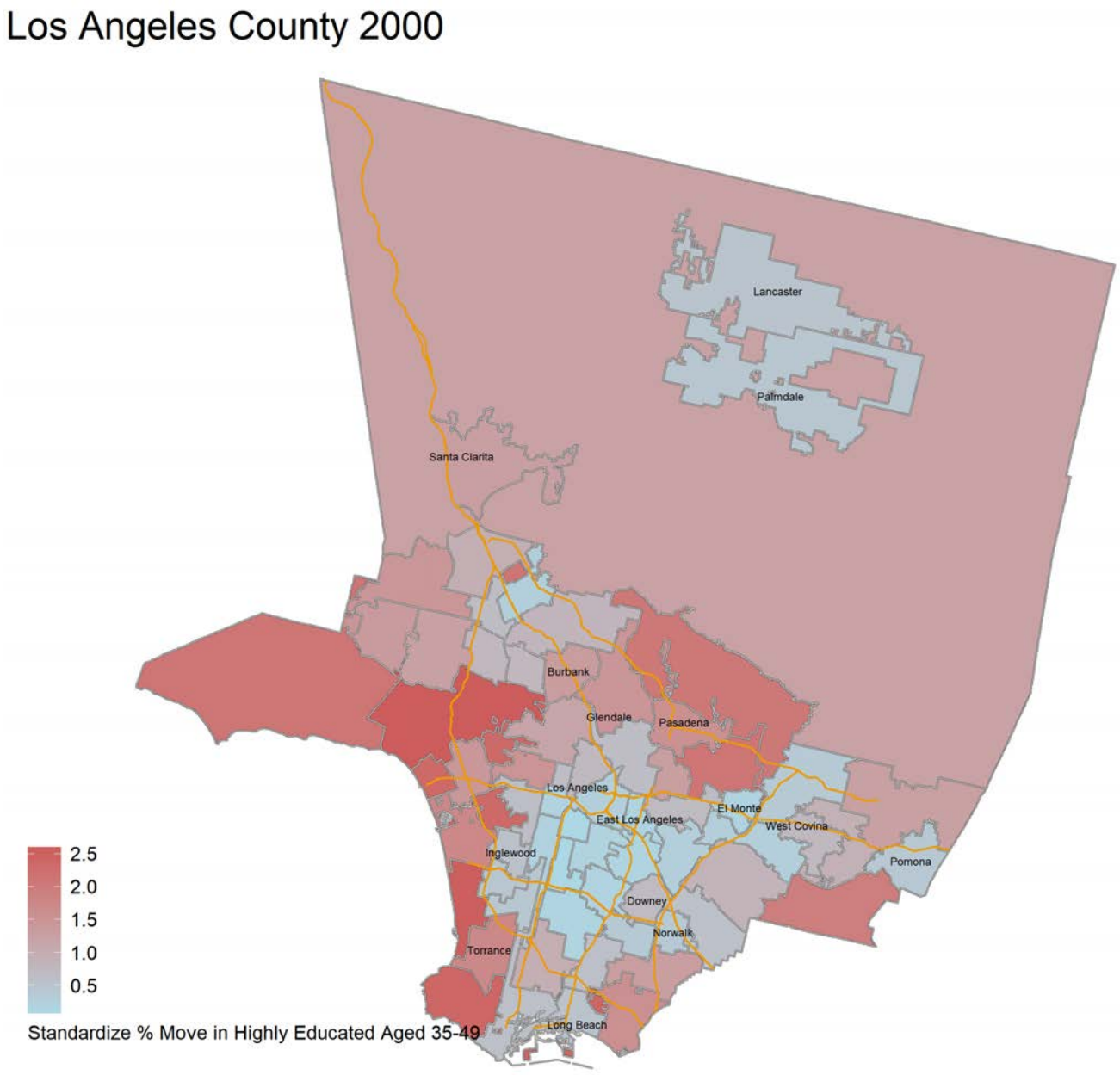


Figure 4.6 Ratio of in-movers to out-movers of highly educated 35-49 year olds in Los Angeles County PUMAs, 2000

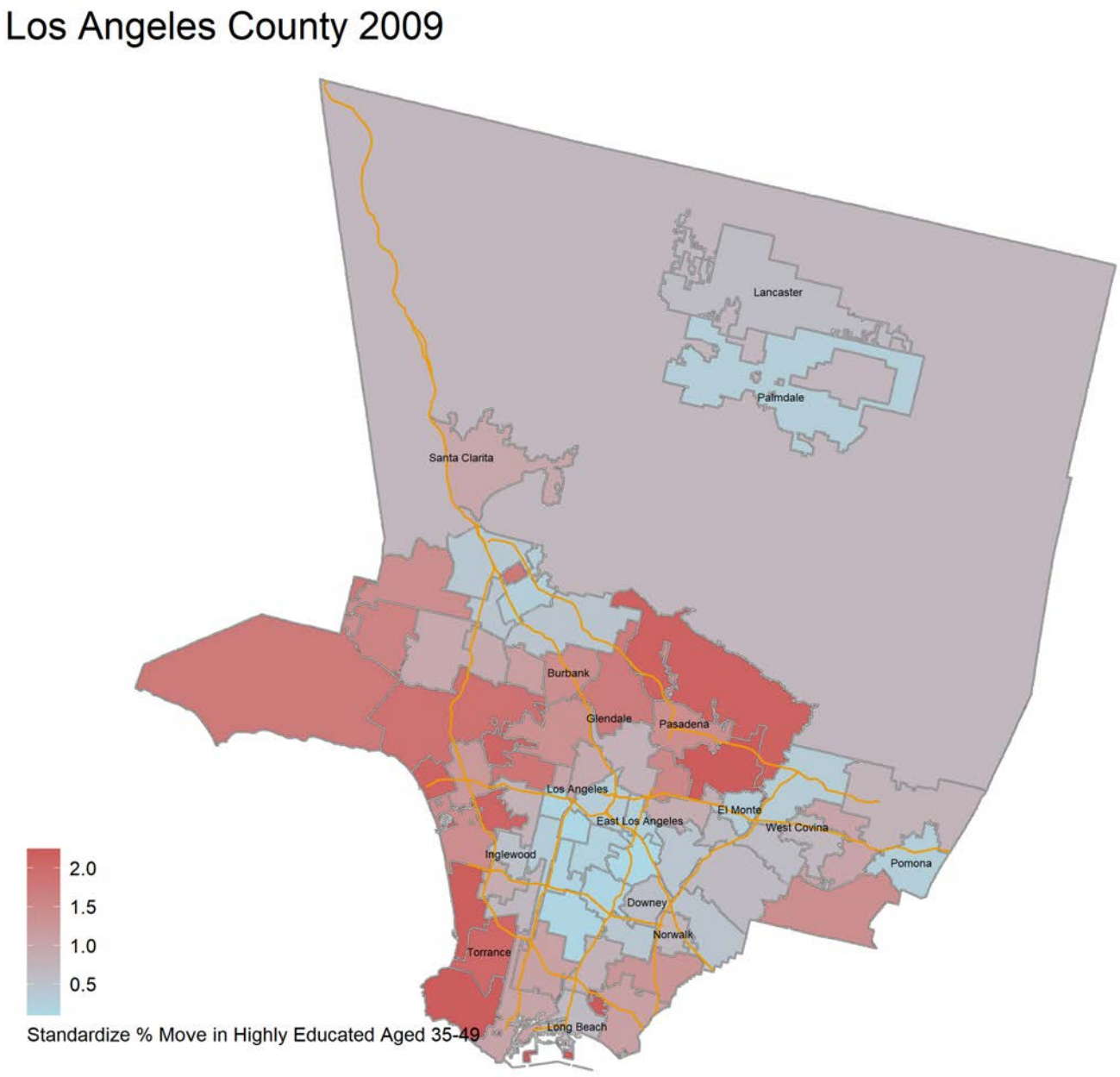


Figure 4.7 Ratio of in-movers to out-movers of highly educated 35-49 year olds in Los Angeles County PUMAs, 2009

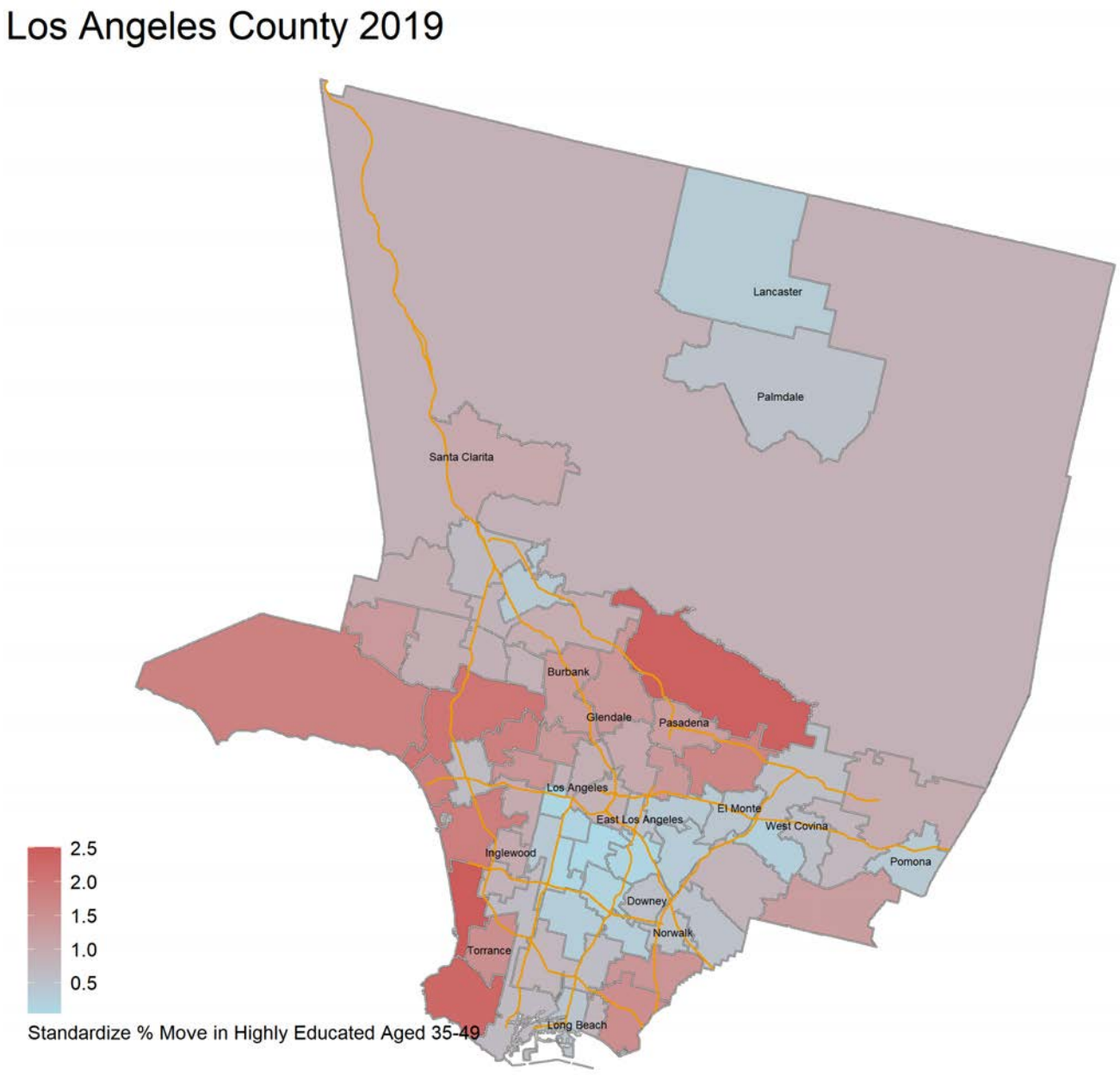
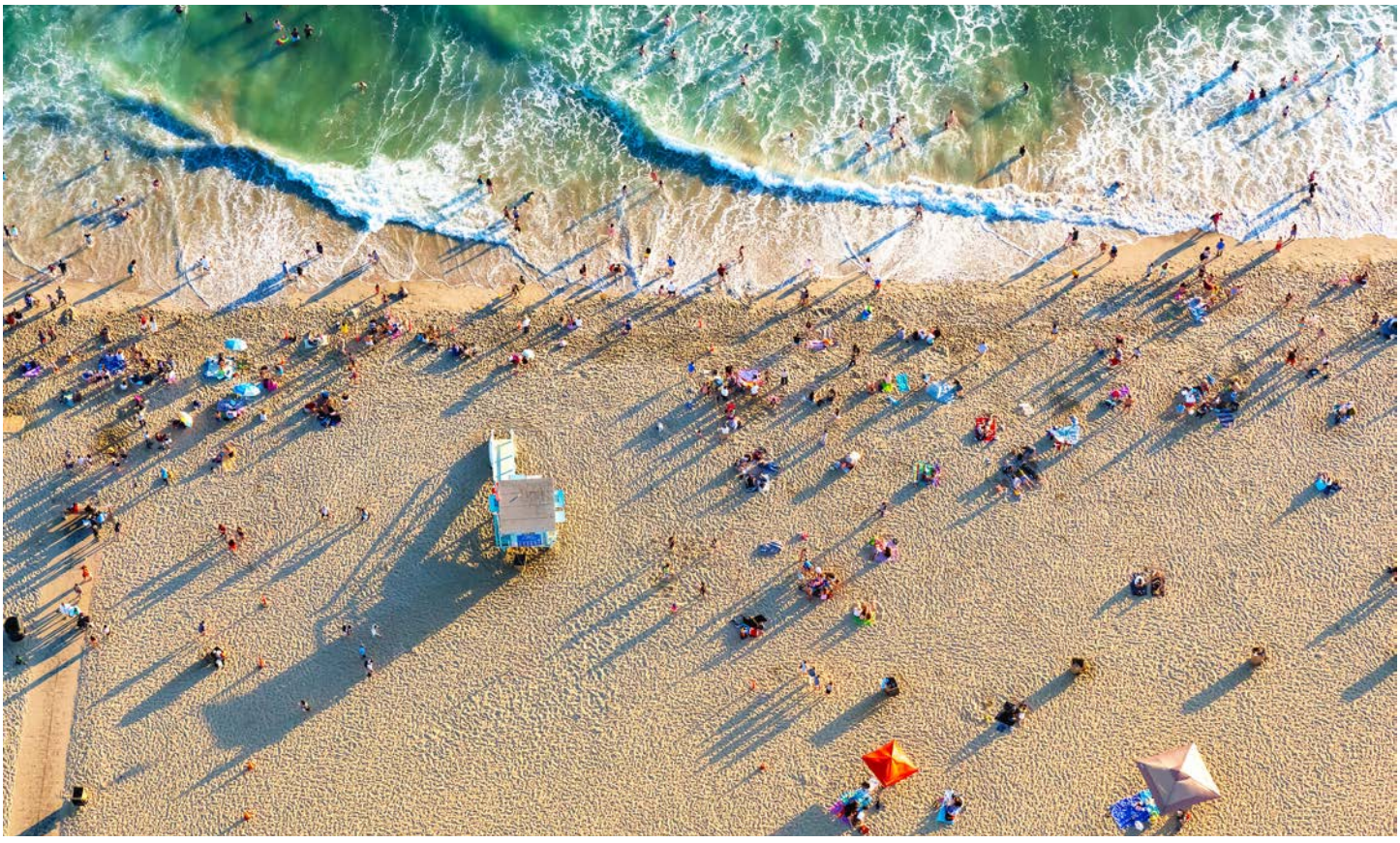


Figure 4.8 Ratio of in-movers to out-movers of highly educated 35-49 year olds in Los Angeles County PUMAs, 2019

Los Angeles County

Age 50-64

The next four maps (Figures 4.9-4.12) show where in Los Angeles County older (age 50-64) highly educated persons are moving during the 1980s, 1990s, 2000s, and 2010s. Up until the most recent decade, the area from Pacific Palisades to Bel Air consistently received a relatively large inflow of these older highly educated residents. The Palos Verdes area in the southwest also consistently received a relatively large inflow of these older highly educated residents.



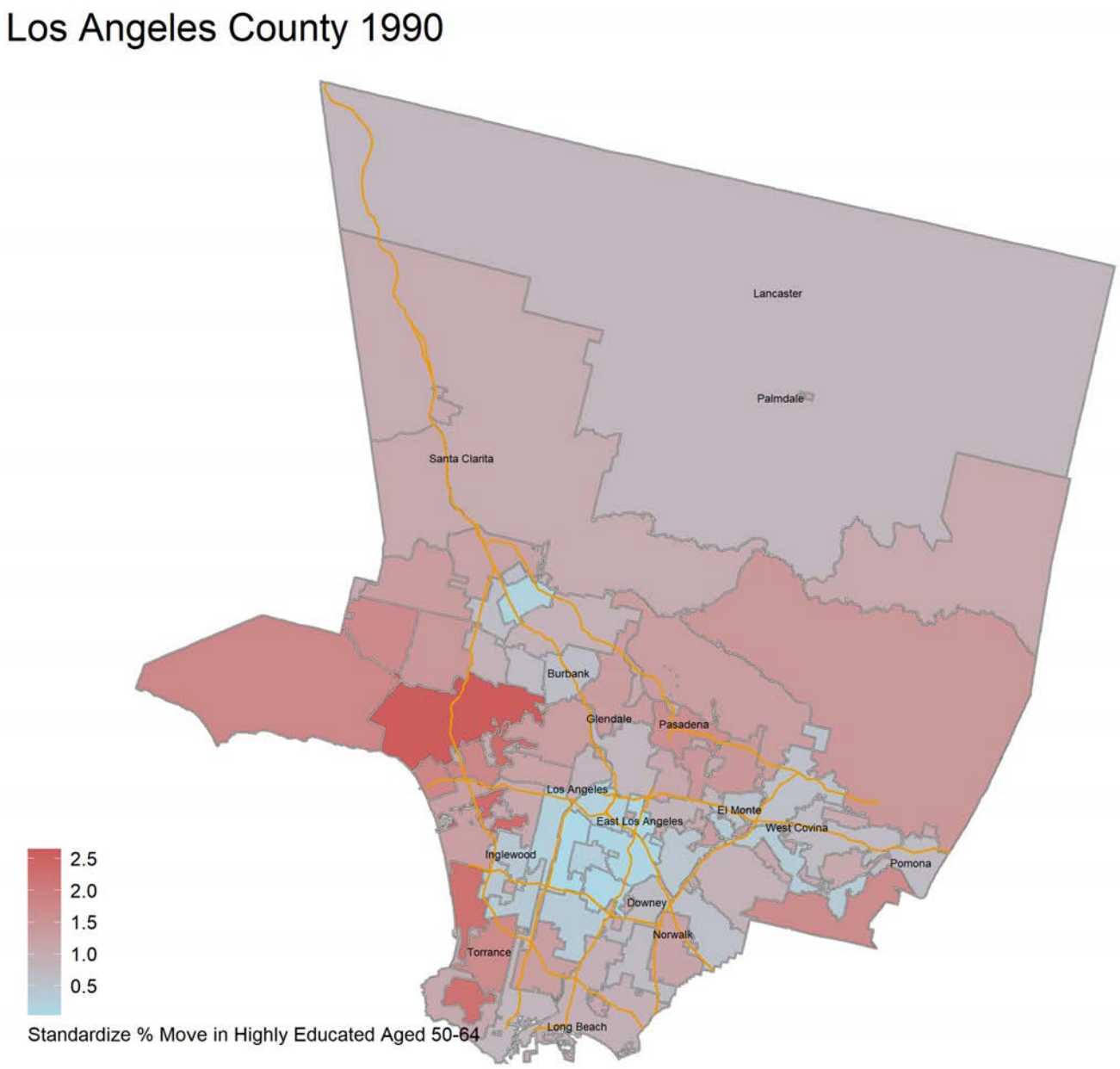


Figure 4.9 Ratio of in-movers to out-movers of highly educated 50-64 year olds in Los Angeles County PUMAs, 1990

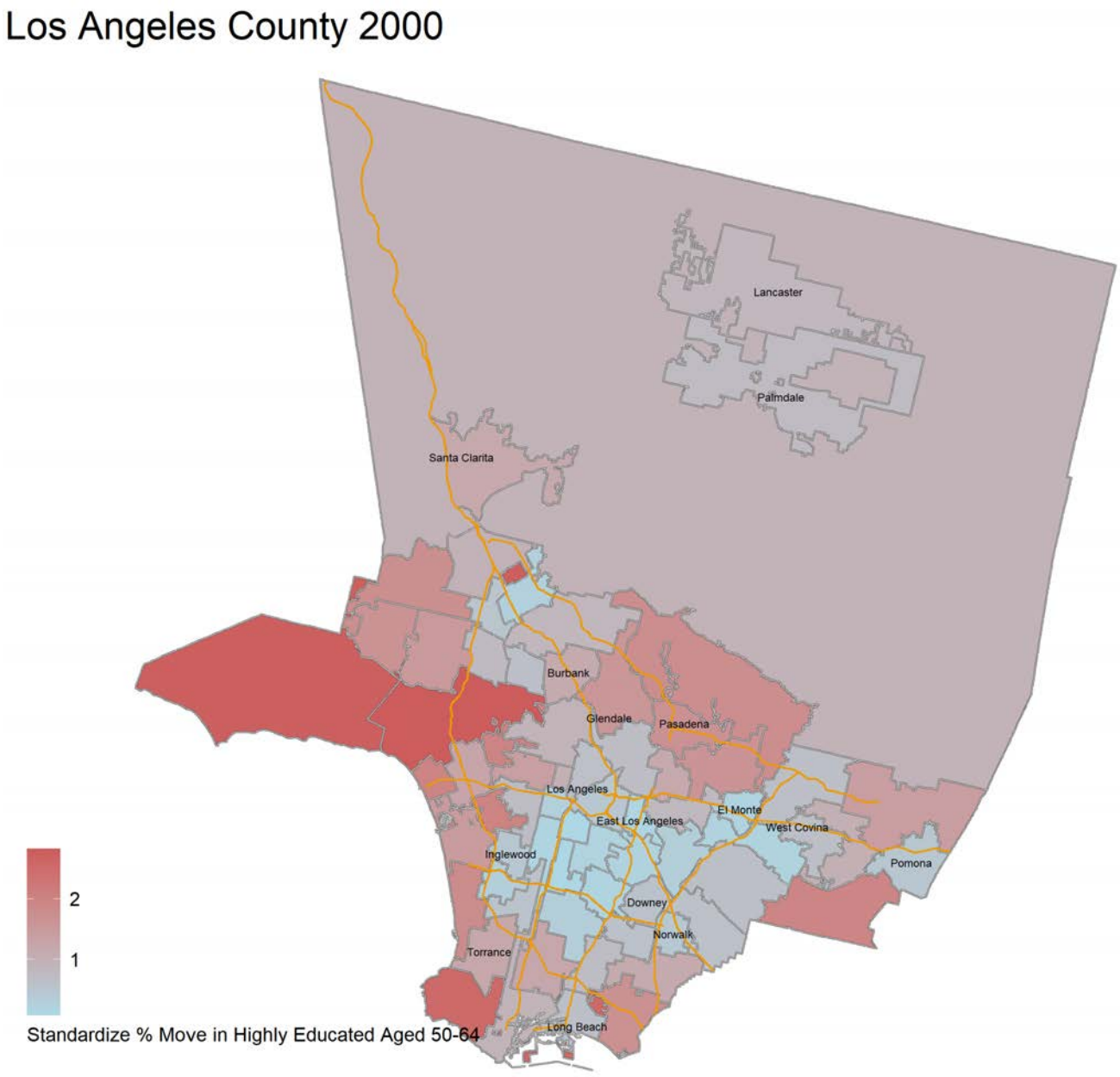


Figure 4.10 Ratio of in-movers to out-movers of highly educated 50-64 year olds in Los Angeles County PUMAs, 2000

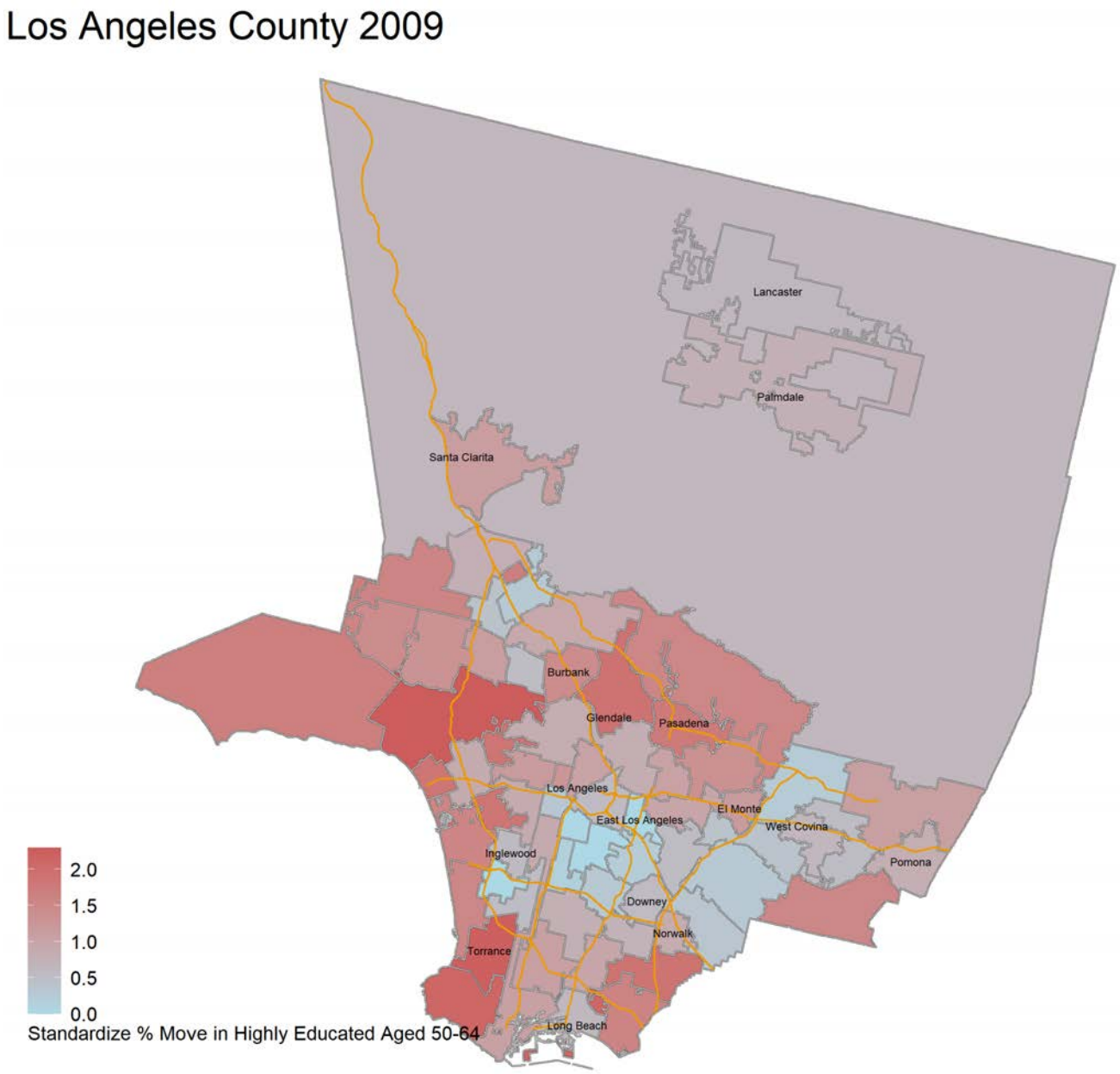


Figure 4.11 Ratio of in-movers to out-movers of highly educated 50-64 year olds in Los Angeles County PUMAs, 2009

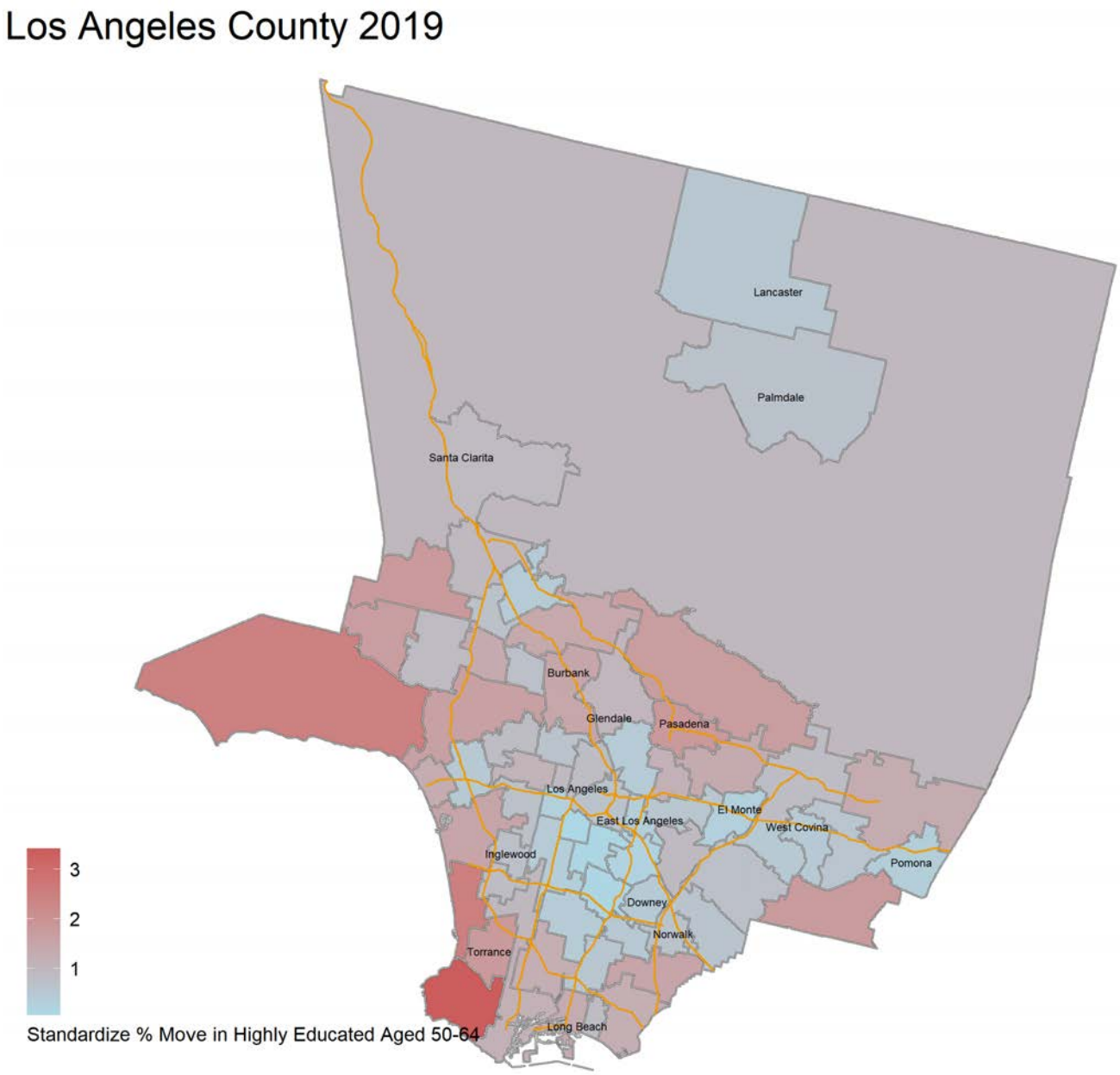


Figure 4.12 Ratio of in-movers to out-movers of highly educated 50-64 year olds in Los Angeles County PUMAs, 2019

Orange County

Age 22-34

In this section we present similar maps of the mobility of highly educated residents for PUMAs in Orange County. The next four maps (Figures 4.13-4.16) show where in Orange County younger (age 22-34) highly educated persons are moving during the 1980s, 1990s, 2000s, and 2010s. Costa Mesa has consistently received a relatively large inflow of younger highly educated residents across this time period, with the strongest inflows occurring in the 1980s and in the most recent decade. Irvine has also consistently received a relatively large inflow of younger highly educated residents across this time period, although it is a bit weaker in the most recent decade. Huntington Beach received a strong relative inflow of younger highly educated workers in the 1980s, a weaker inflow in the next two decades, and no relative inflow in the most recent decade.

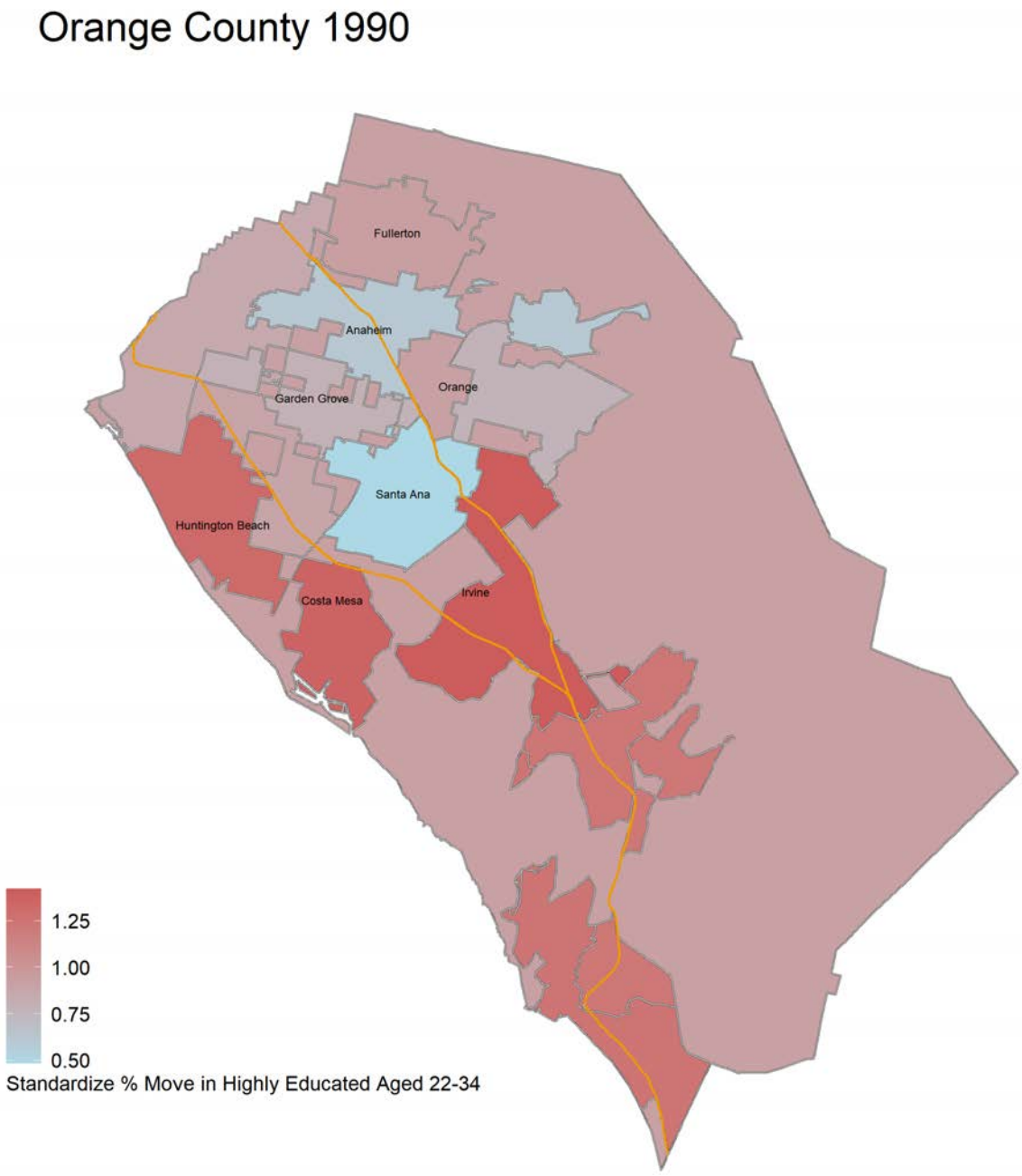


Figure 4.13 Ratio of in-movers to out-movers of highly educated 22-34 year olds in Orange County PUMAs, 1990

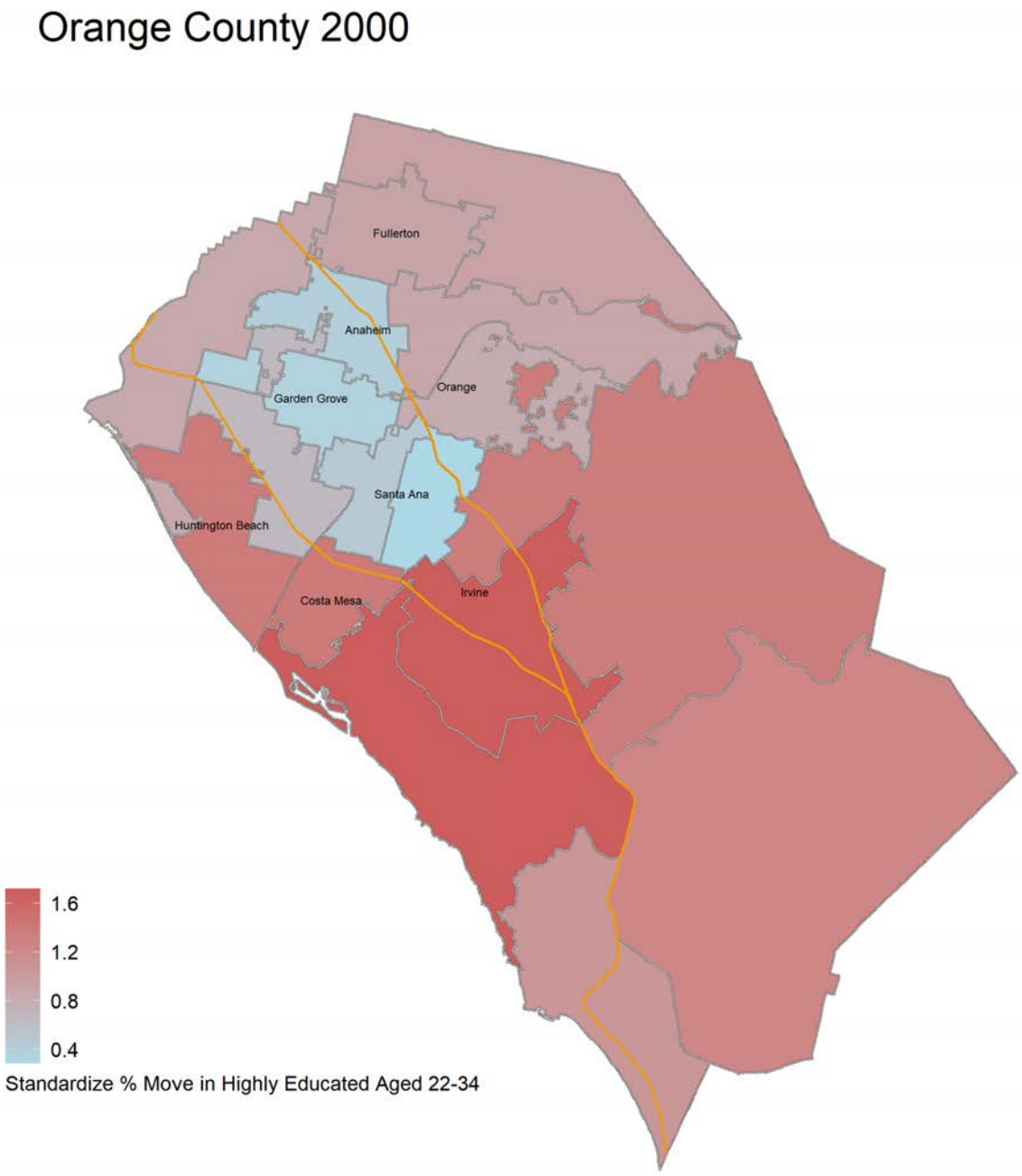


Figure 4.14 Ratio of in-movers to out-movers of highly educated 22-34 year olds in Orange County PUMAs, 2000

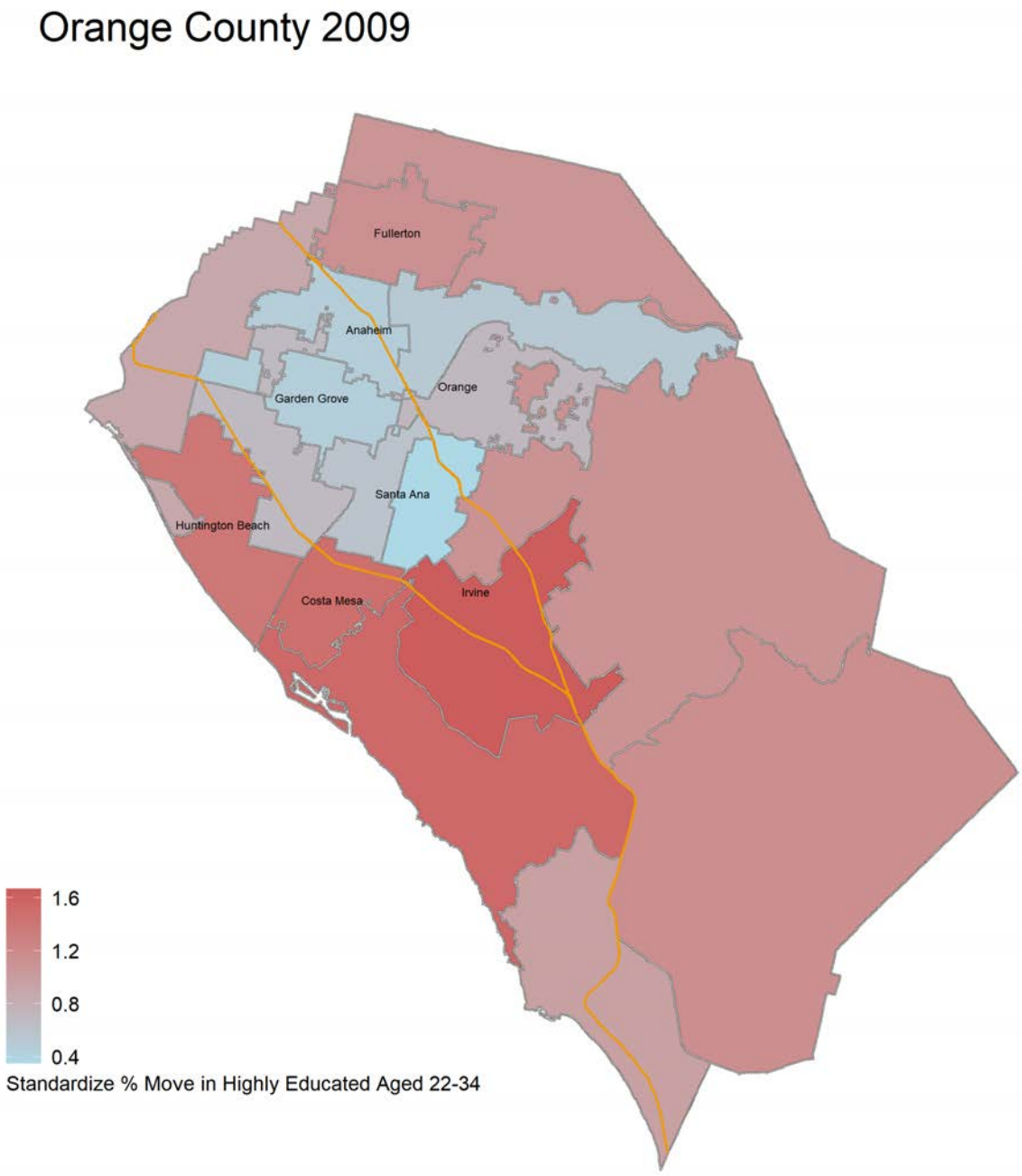


Figure 4.15 Ratio of in-movers to out-movers of highly educated 22-34 year olds in Orange County PUMAs, 2009

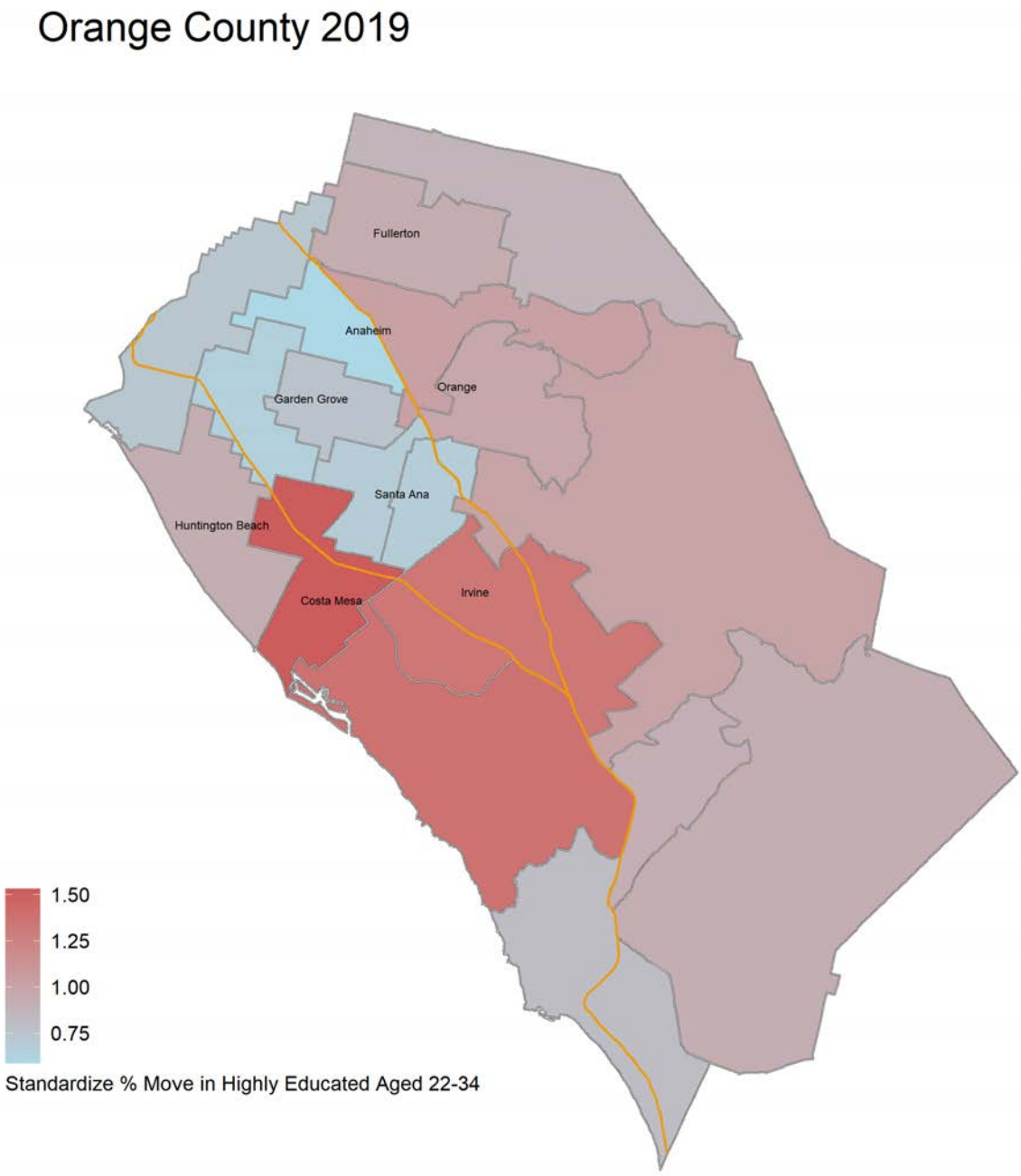


Figure 4.16 Ratio of in-movers to out-movers of highly educated 22-34 year olds in Orange County PUMAs, 2000

Orange County

Age 35-49

These next four maps (Figures 4.17-4.20) show where in Orange County middle-aged (age 35-49) highly educated persons are moving during the 1980s, 1990s, 2000s, and 2010s. Irvine has consistently received a relatively large inflow of highly educated middle-aged residents, though this flow has been somewhat weaker in the most recent decade. The Newport Coast area received a relatively large inflow of this group in the 2000s, though the relative inflow was weaker in the other decades.

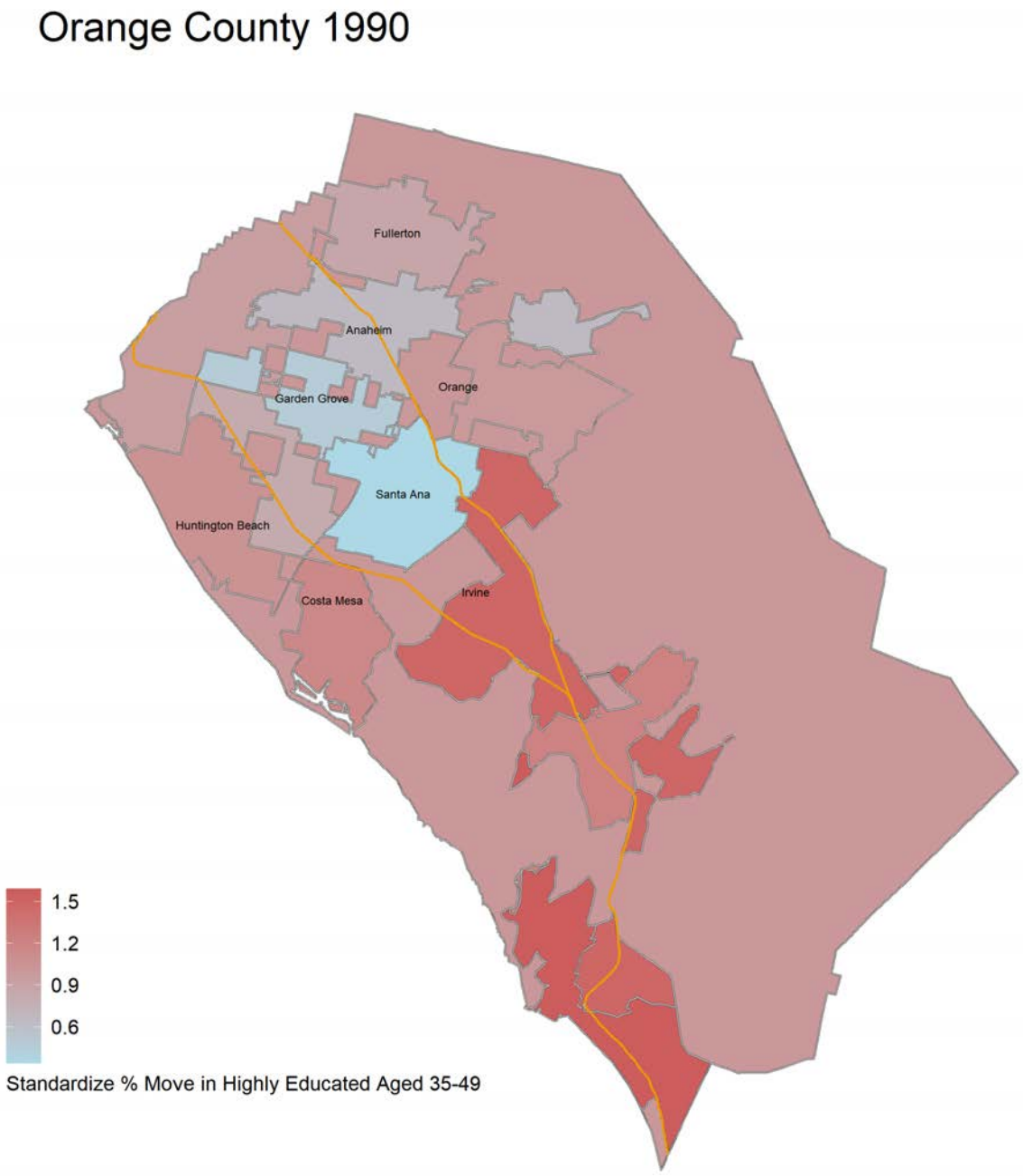


Figure 4.17 Ratio of in-movers to out-movers of highly educated 35-49 year olds in Orange County PUMAs, 1990

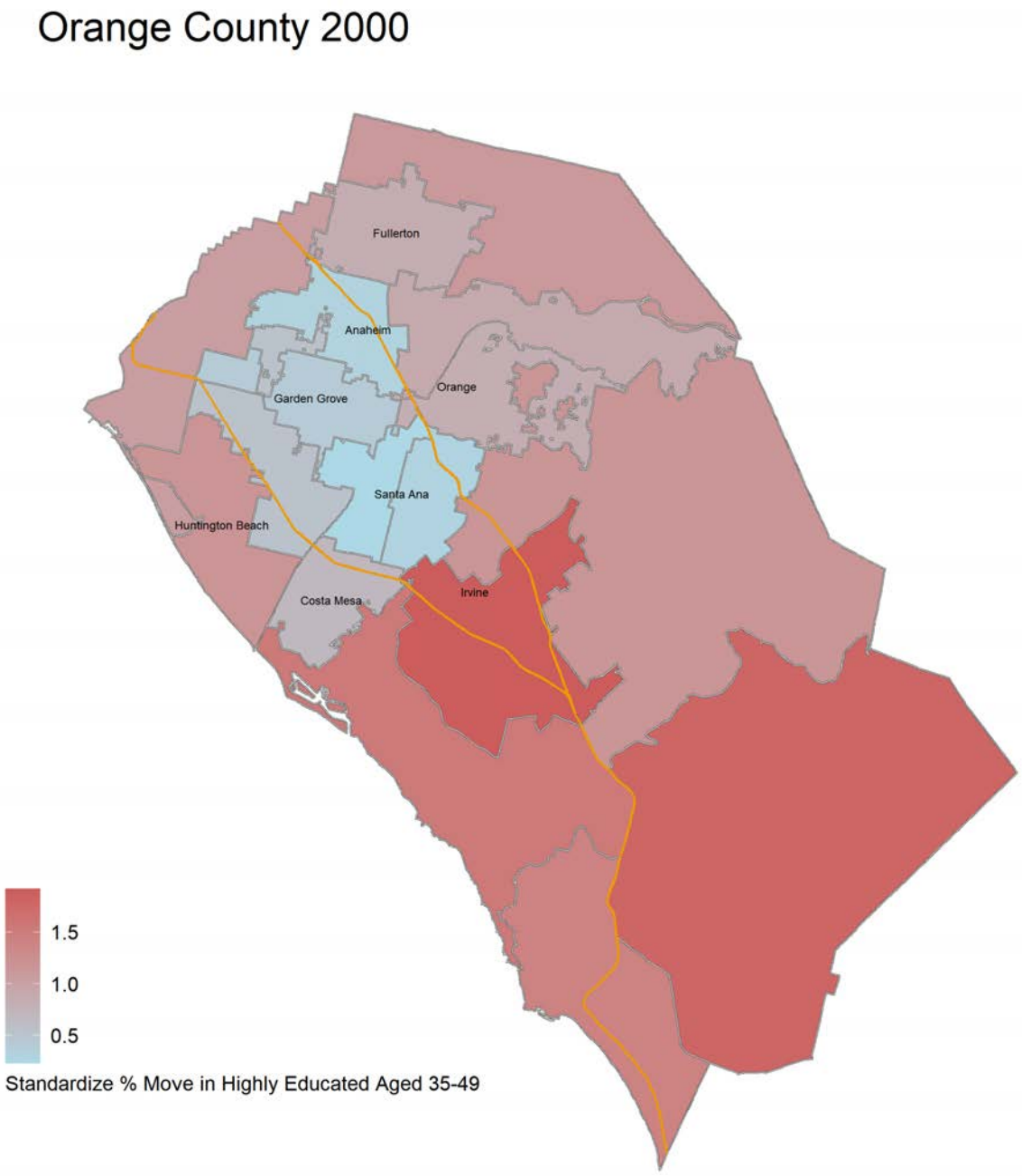


Figure 4.18 Ratio of in-movers to out-movers of highly educated 35-49 year olds in Orange County PUMAs, 2000

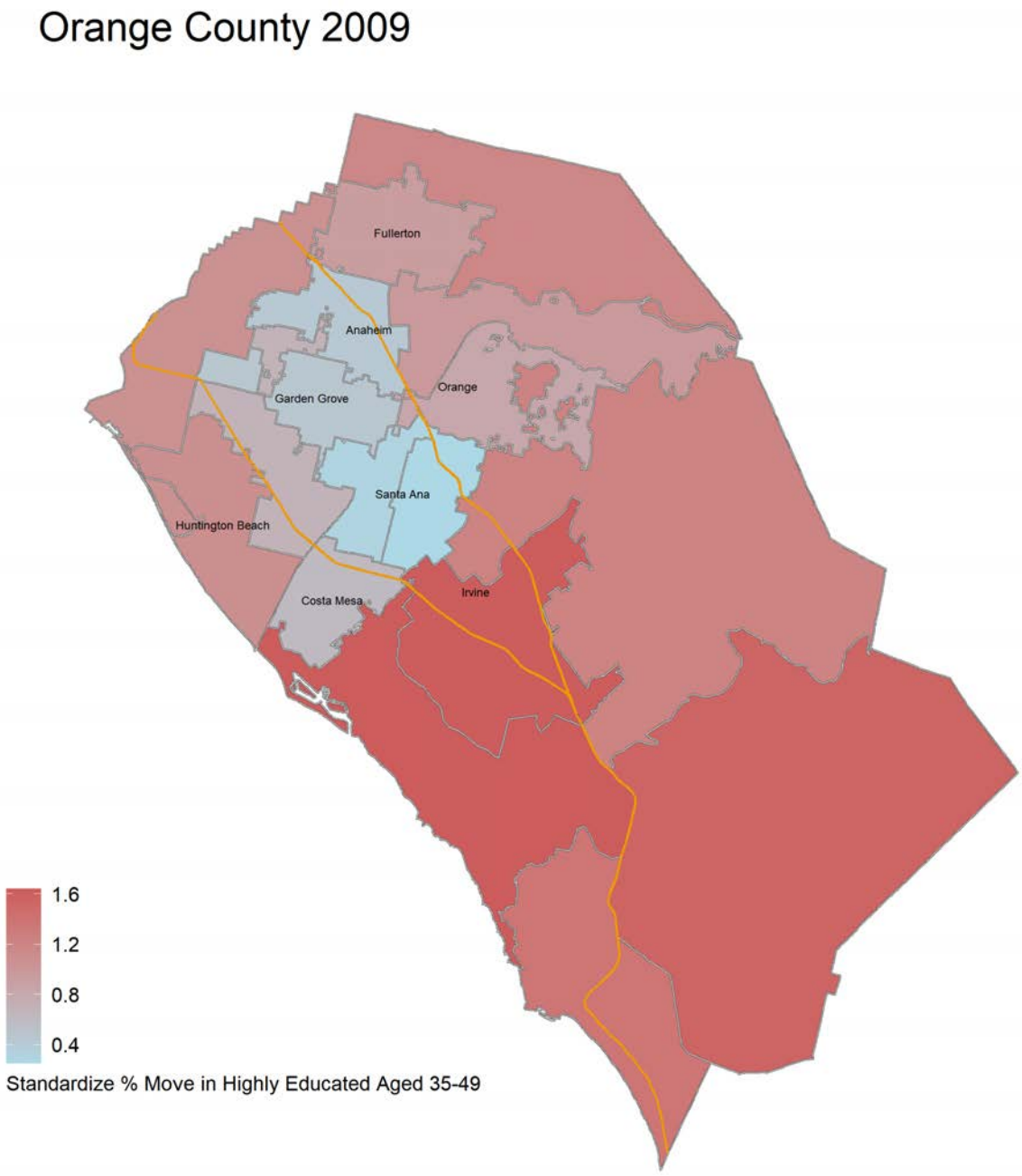


Figure 4.19 Ratio of in-movers to out-movers of highly educated 35-49 year olds in Orange County PUMAs, 2009

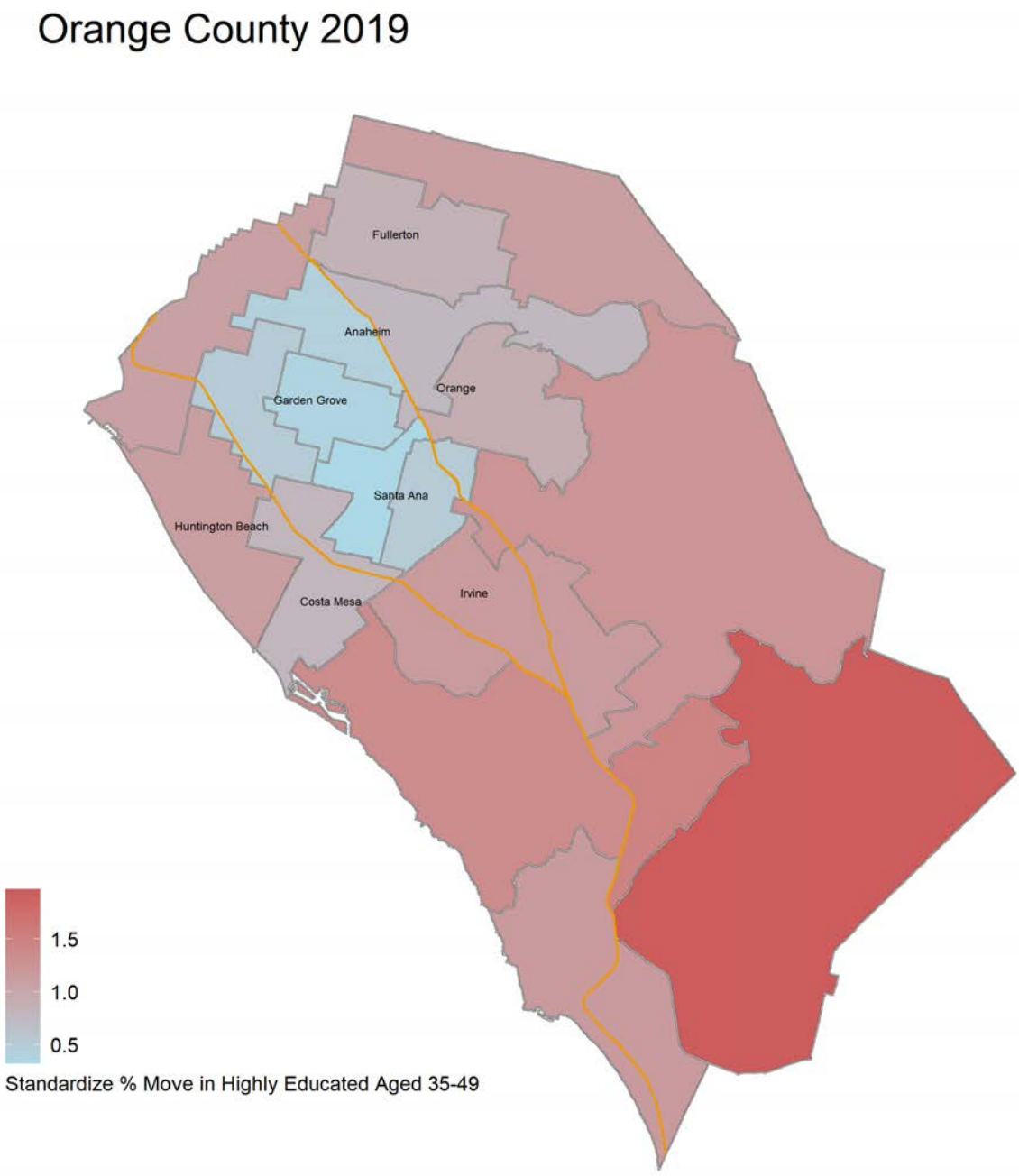


Figure 4.20 Ratio of in-movers to out-movers of highly educated 35-49 year olds in Orange County PUMAs, 2019

Orange County

Age 50-64

These next four maps (Figures 4.21-4.24) show where in Orange County older (age 50-64) highly educated persons are moving during the 1980s, 1990s, 2000s, and 2010s. Southern Orange County has consistently received a relatively large inflow of these highly educated older residents. Newport Coast has received a relatively large inflow of this group in the three most recent decades.

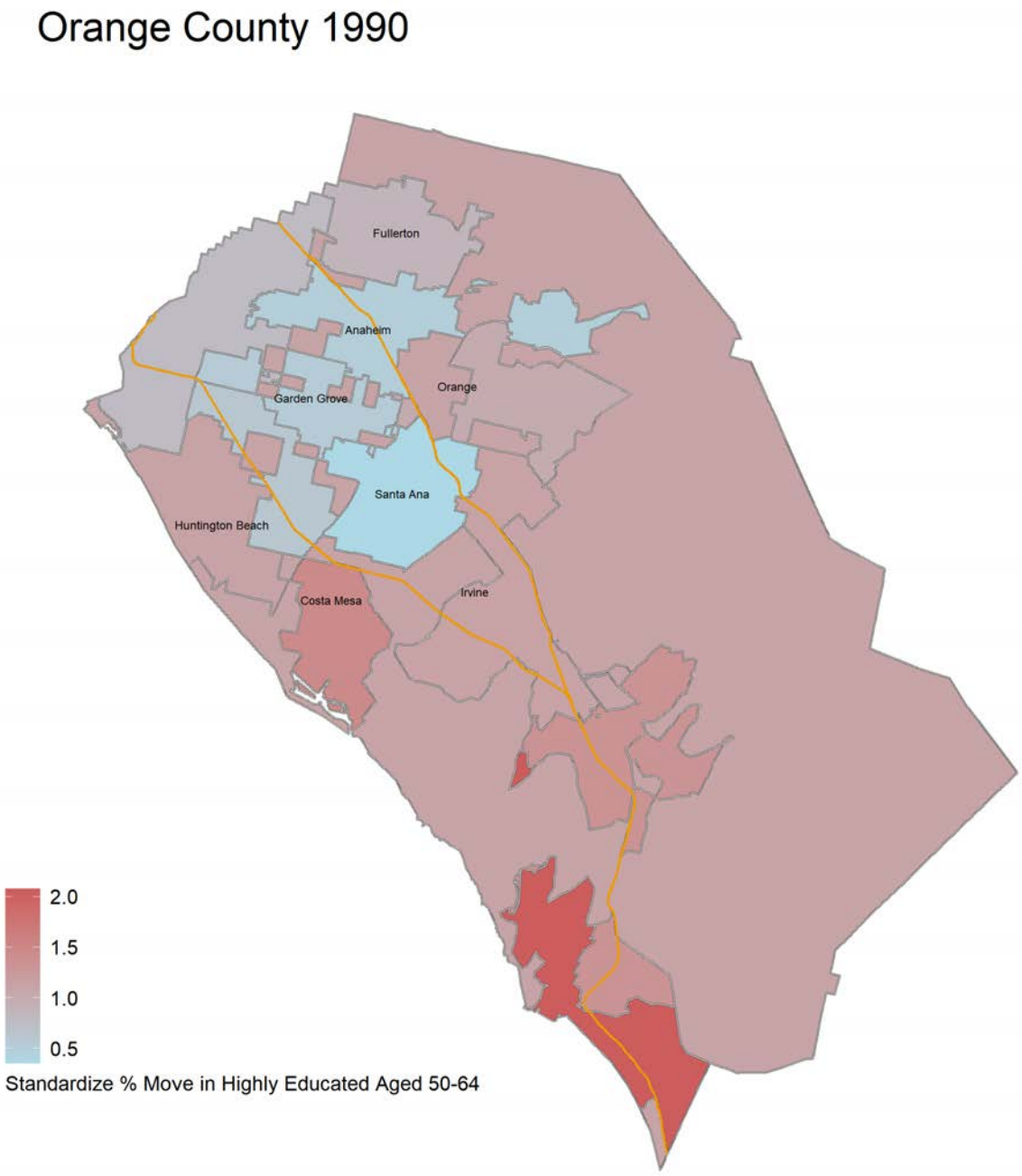


Figure 4.21 Ratio of in-movers to out-movers of highly educated 50-64 year olds in Orange County PUMAs, 1990

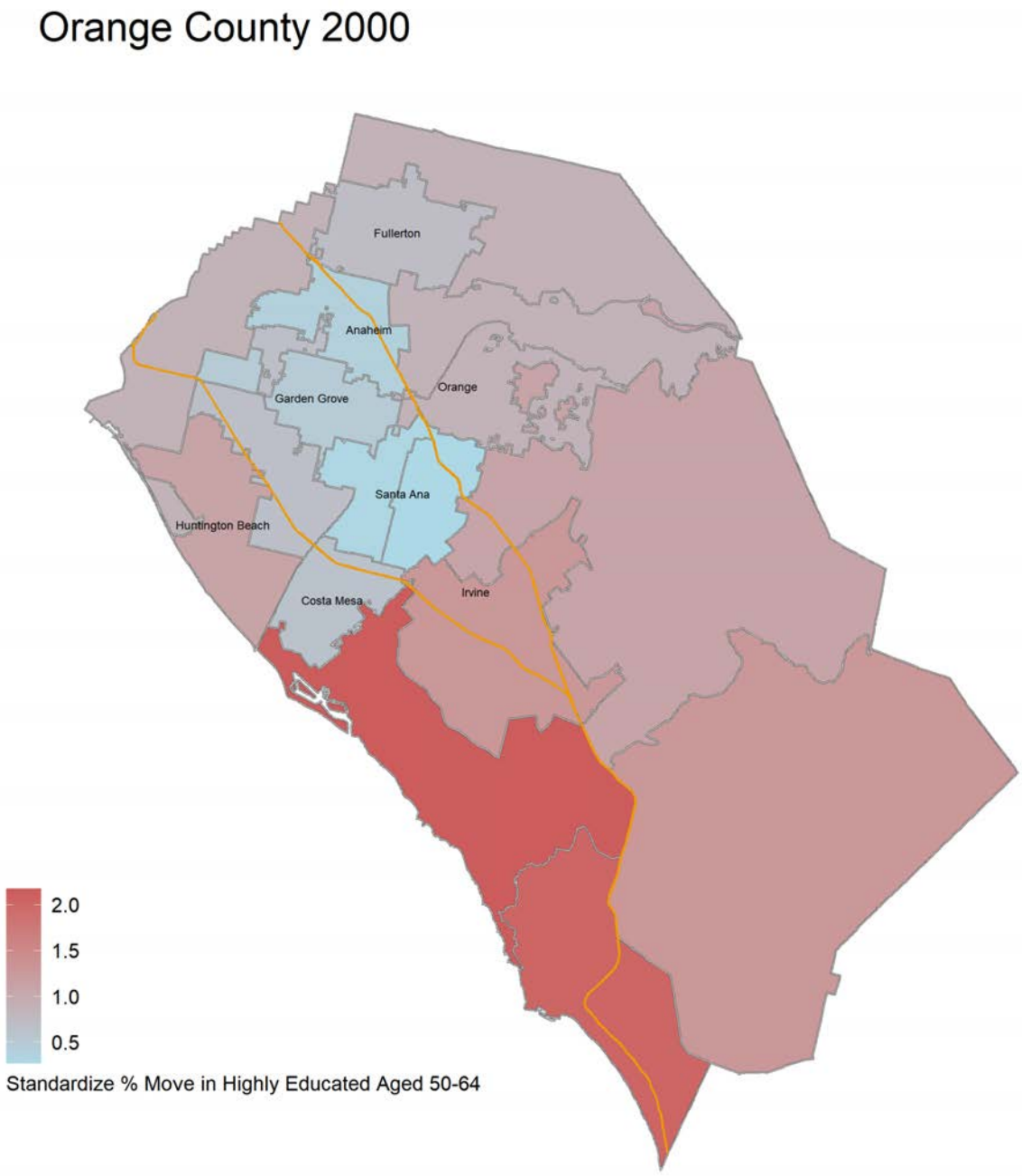


Figure 4.22 Ratio of in-movers to out-movers of highly educated 50-64 year olds in Orange County PUMAs, 2000

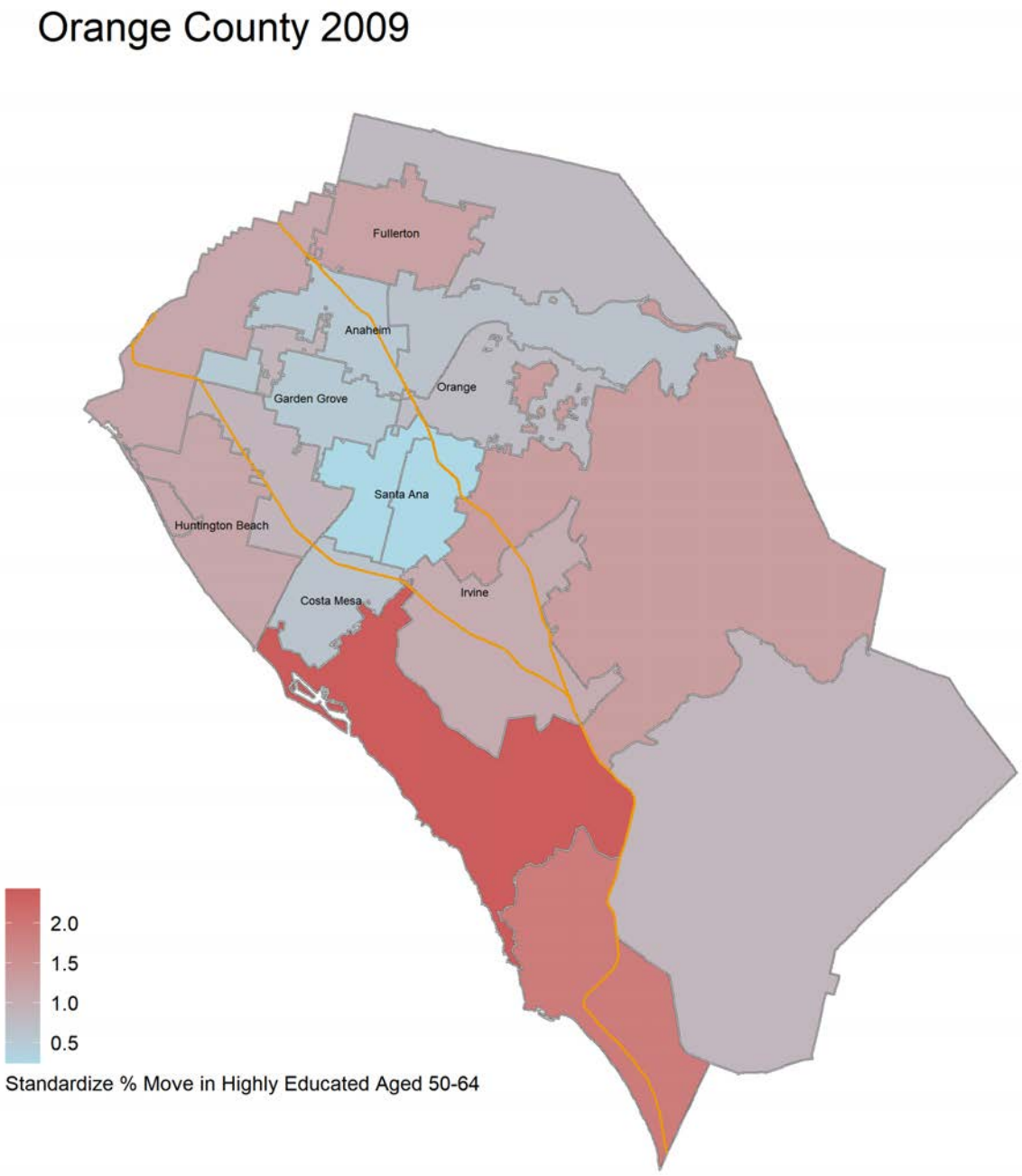


Figure 4.23 Ratio of in-movers to out-movers of highly educated 50-64 year olds in Orange County PUMAs, 2009

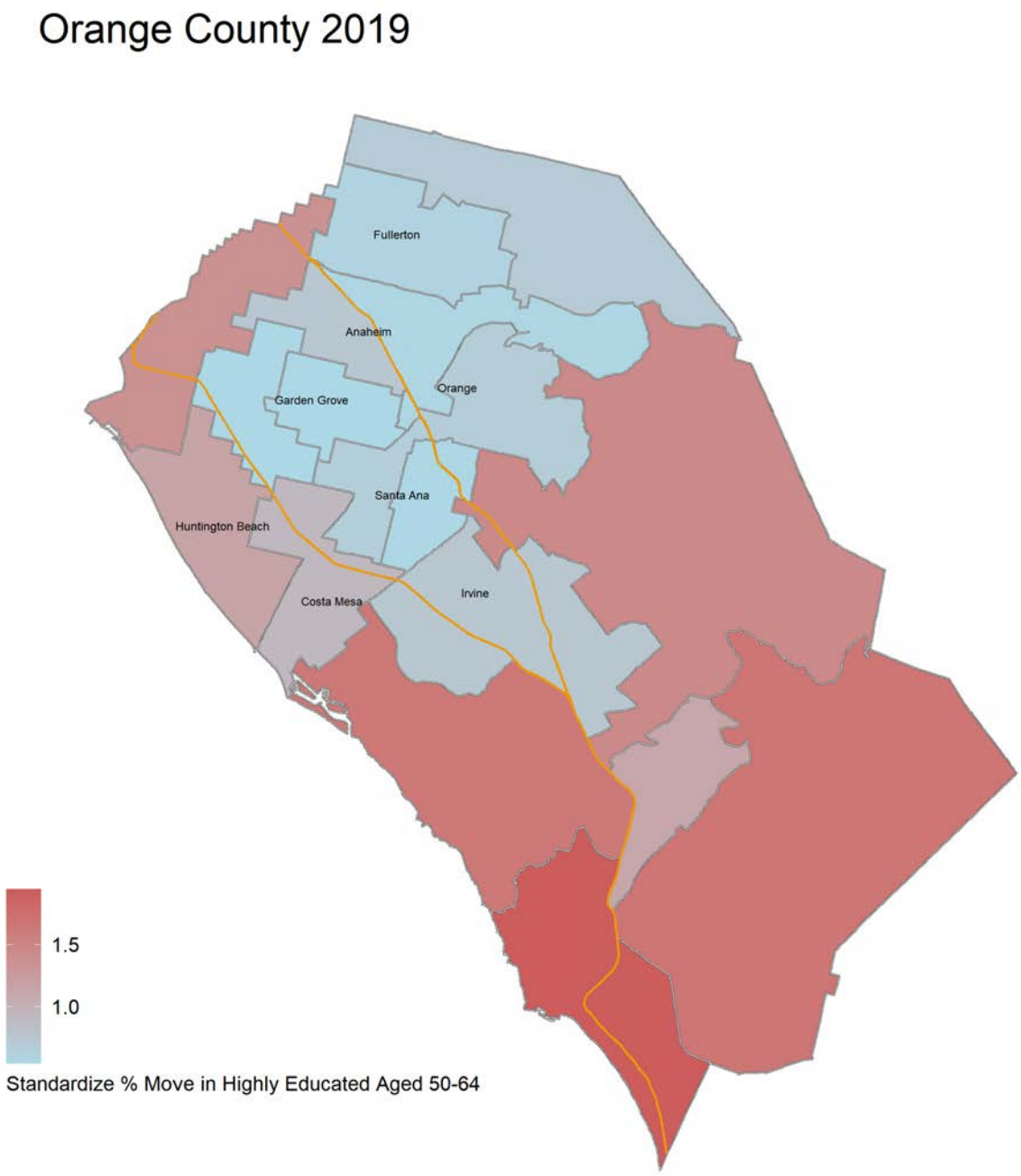


Figure 4.24 Ratio of in-movers to out-movers of highly educated 50-64 year olds in Orange County PUMAs, 2019

San Diego County

Age 22-34

In this section we present similar maps of the mobility of highly educated residents for neighborhoods in San Diego County. The next four maps (Figures 4.25-4.28) show where in San Diego County younger (age 22-34) highly educated persons are moving during the 1980s, 1990s, 2000s, and 2010s. The area north of the harbor—Mission Bay, Pacific Beach, and La Jolla—has consistently received a relatively large inflow of highly educated younger residents. While downtown San Diego experienced a relative outflow of younger highly educated residents in the 1980s, this has reversed since then and they have experienced a larger relative inflow every decade since. Likewise, the area south of Coronado has been receiving a larger relative inflow of this group in the last three decades.

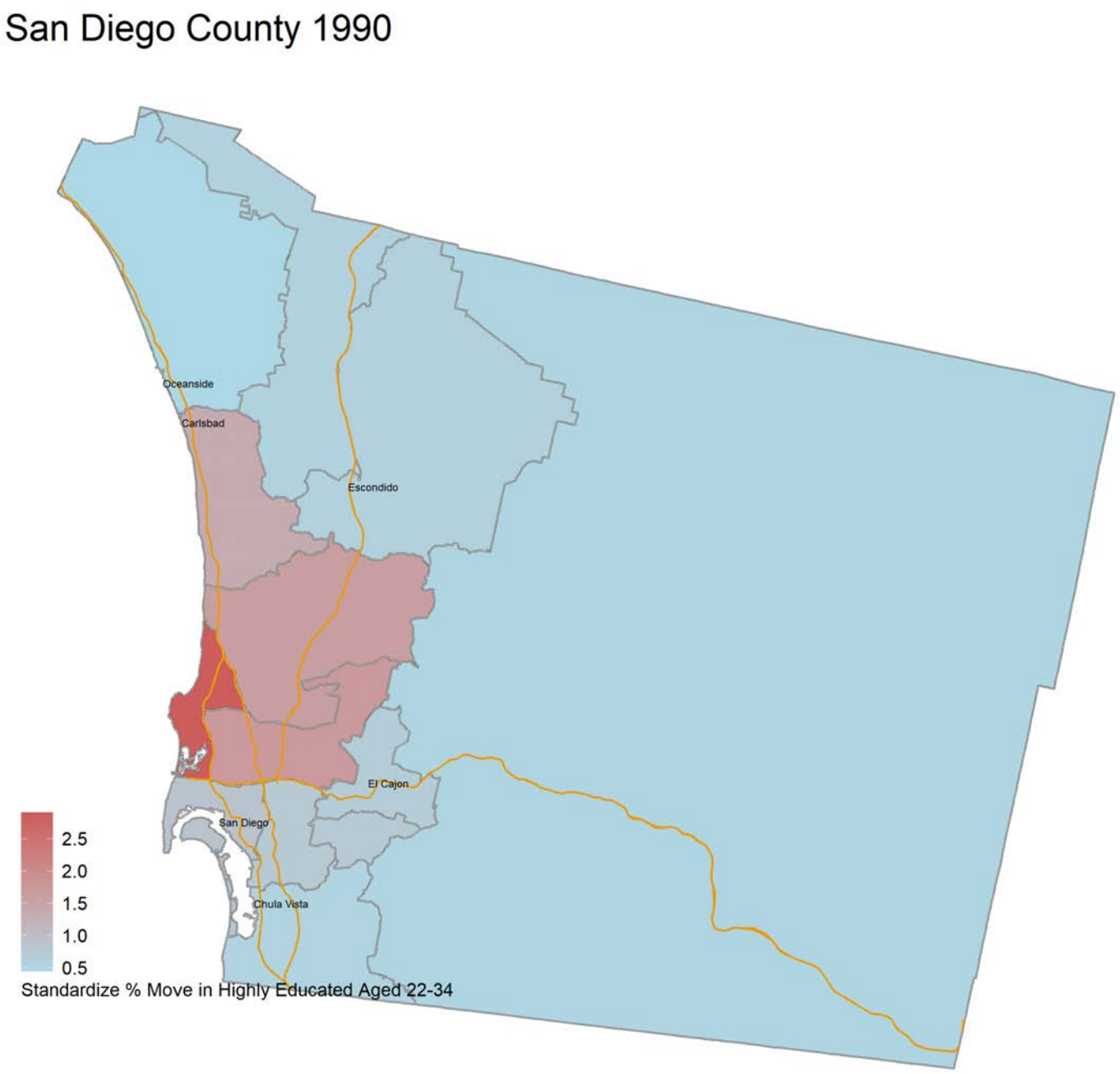


Figure 4.25 Ratio of in-movers to out-movers of highly educated 22-34 year olds in San Diego County PUMAs, 1990

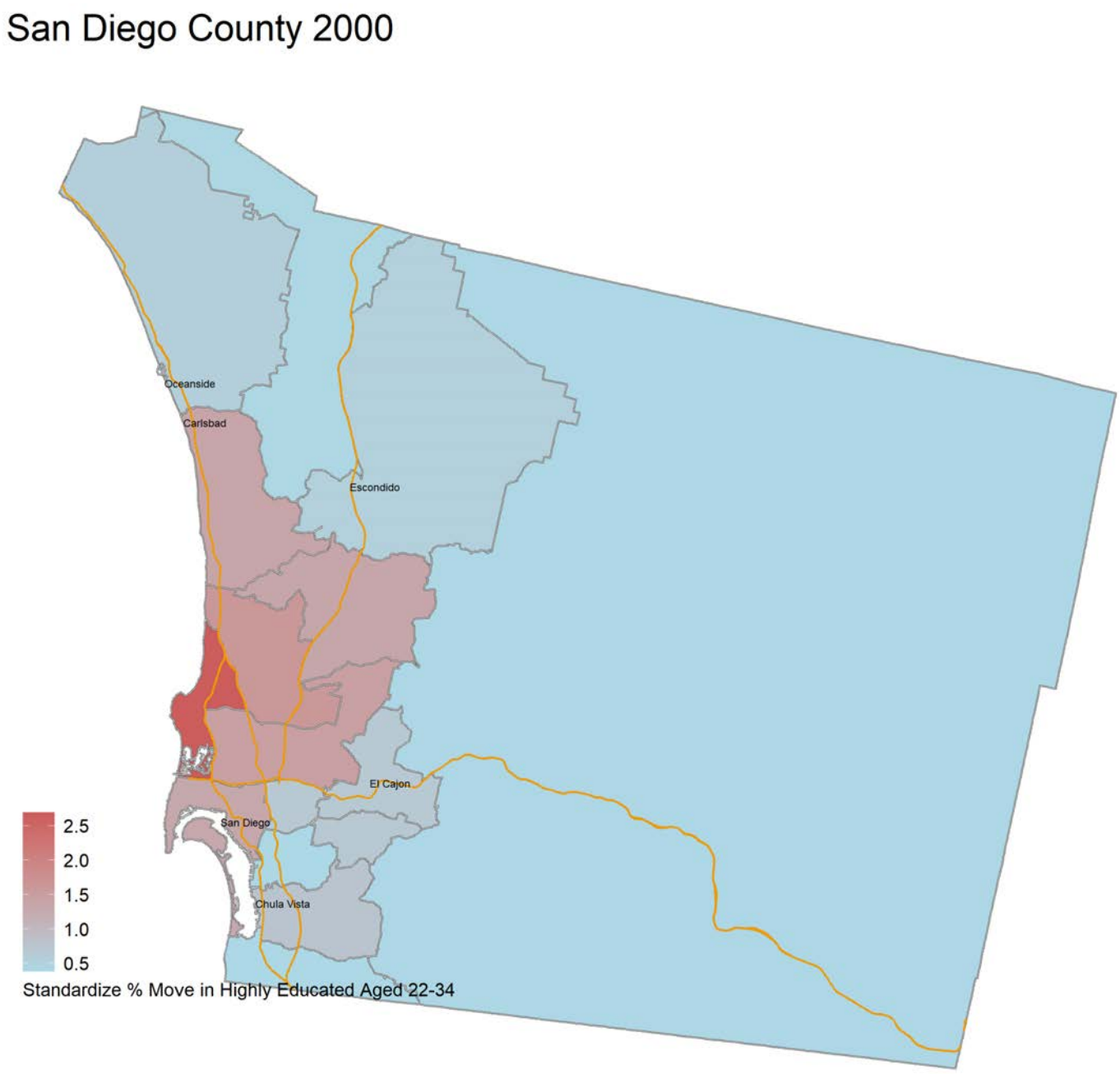


Figure 4.26 Ratio of in-movers to out-movers of highly educated 22-34 year olds in San Diego County PUMAs, 2000

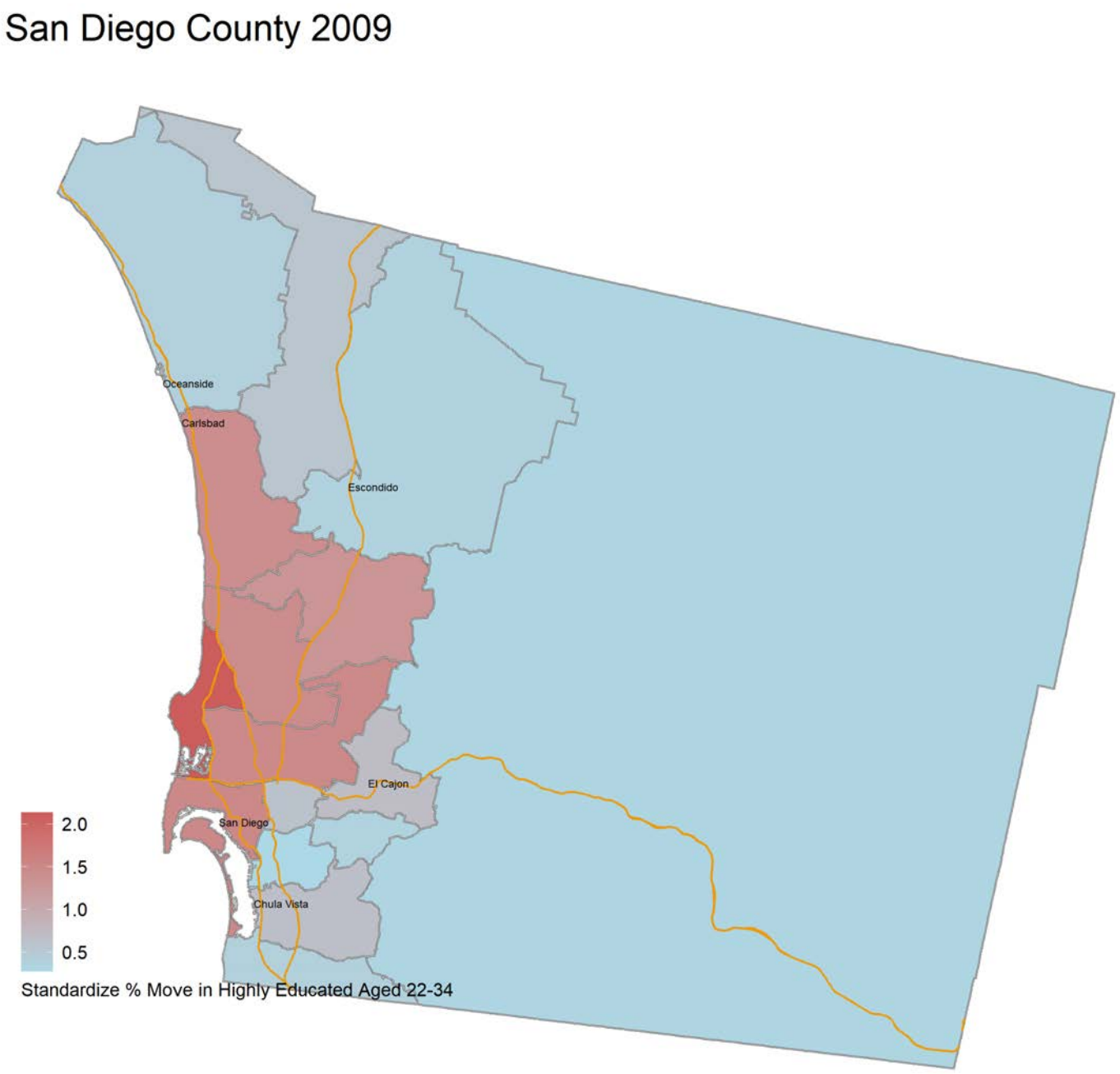


Figure 4.27 Ratio of in-movers to out-movers of highly educated 22-34 year olds in San Diego County PUMAs, 2009

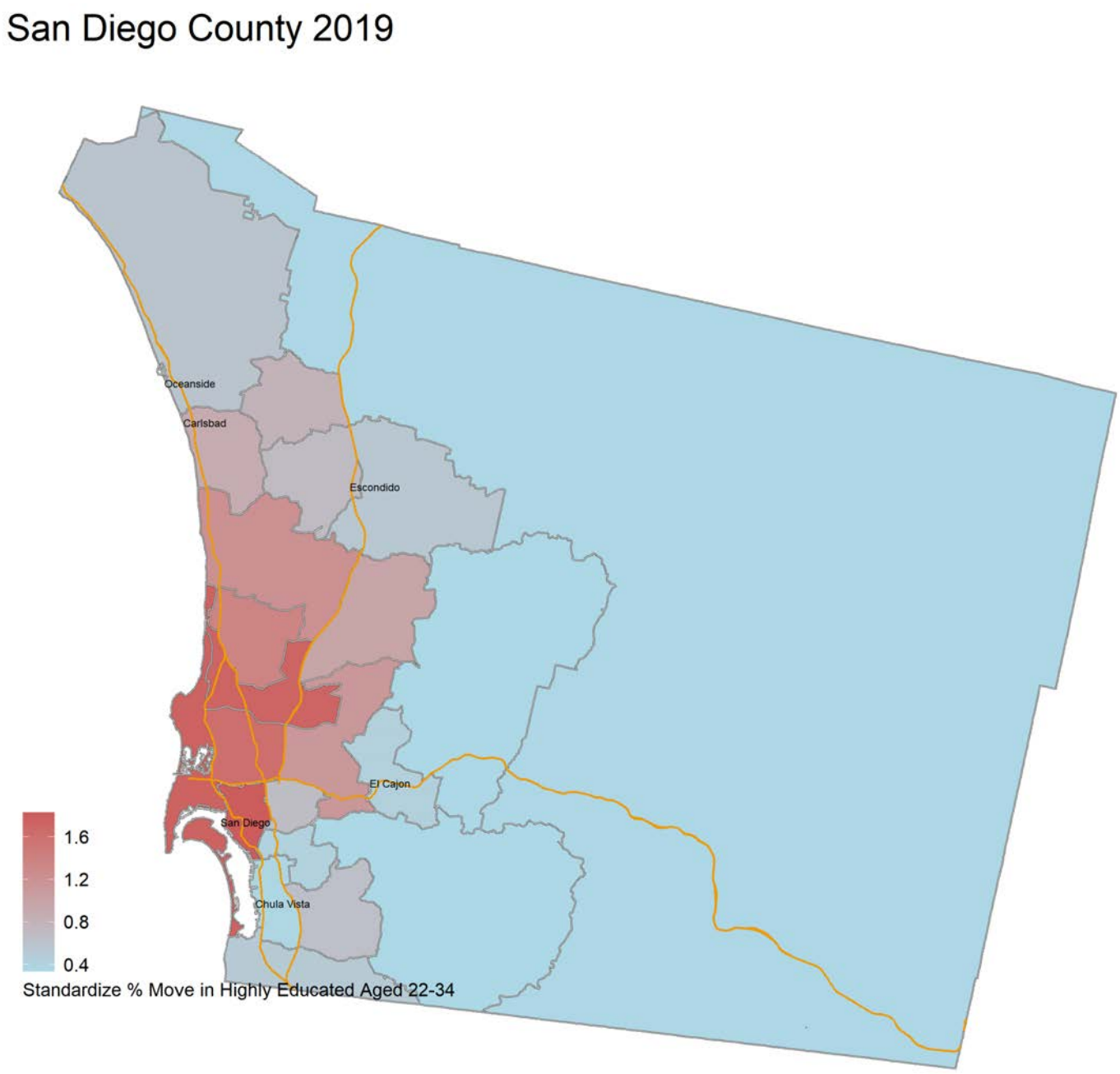


Figure 4.28 Ratio of in-movers to out-movers of highly educated 22-34 year olds in San Diego County PUMAs, 2019

San Diego County

Age 35-49

These next four maps (Figures 4.29-4.32) show where in San Diego County middle-aged (age 35-49) highly educated persons are moving during the 1980s, 1990s, 2000s, and 2010s. There has been a consistent relatively large inflow of middle aged highly educated residents to northern San Diego County, up to Carlsbad along the coast, and below Escondido in the inland area. In recent decades, there has been a modest inflow of this group to the southern inland portion.

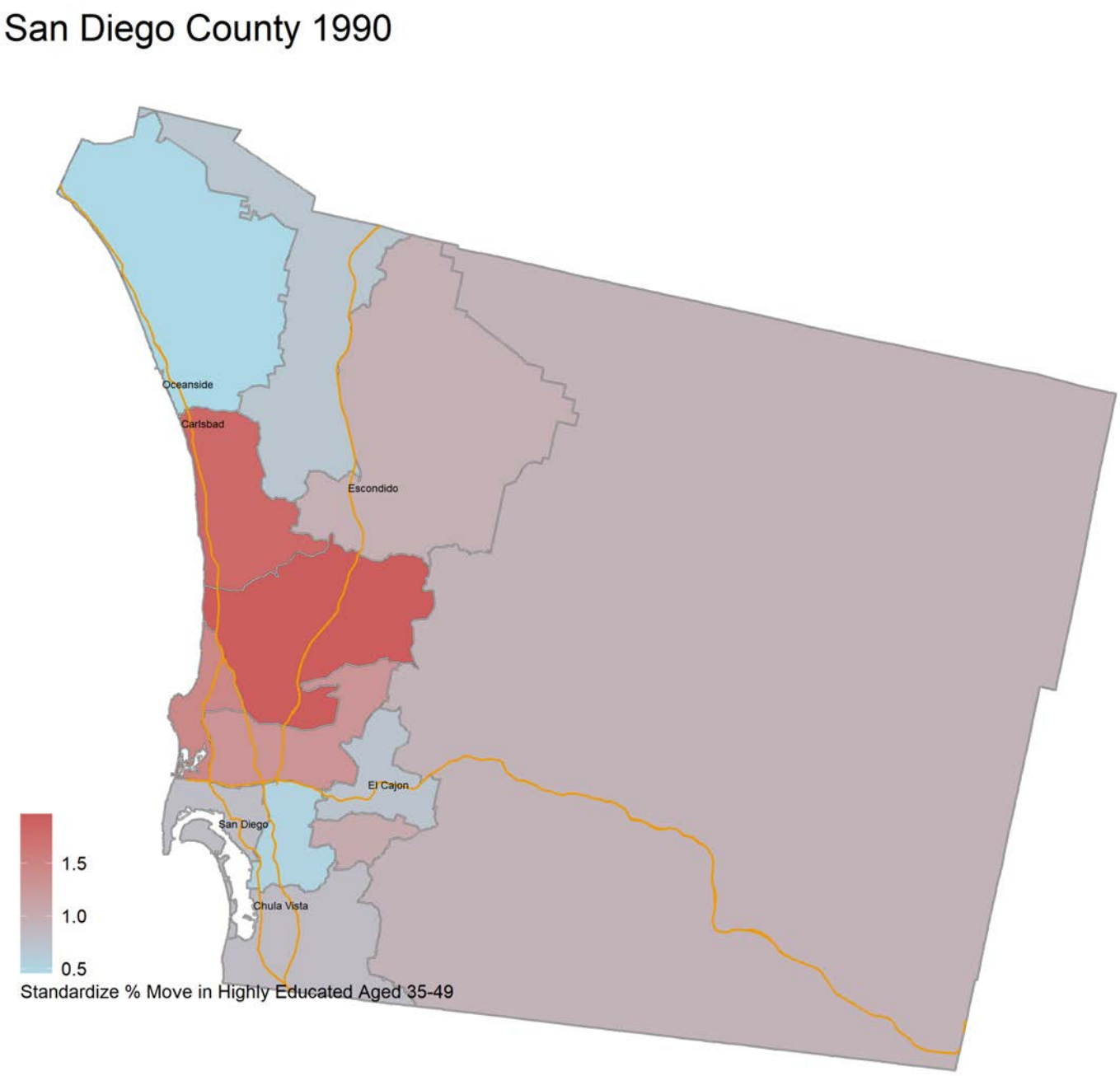


Figure 4.29 Ratio of in-movers to out-movers of highly educated 35-49 year olds in San Diego County PUMAs, 1990

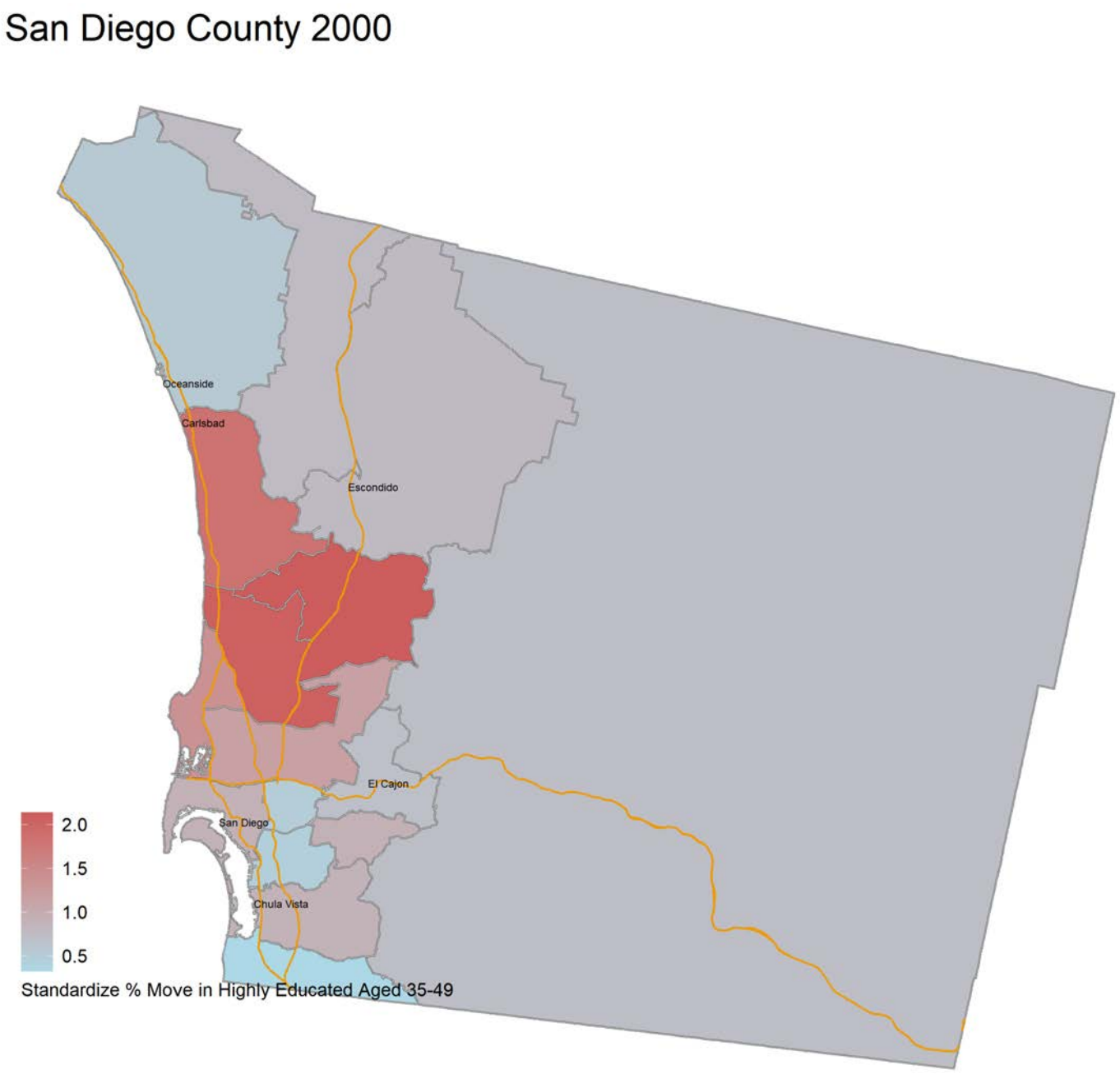


Figure 4.30 Ratio of in-movers to out-movers of highly educated 35-49 year olds in San Diego County PUMAs, 2000

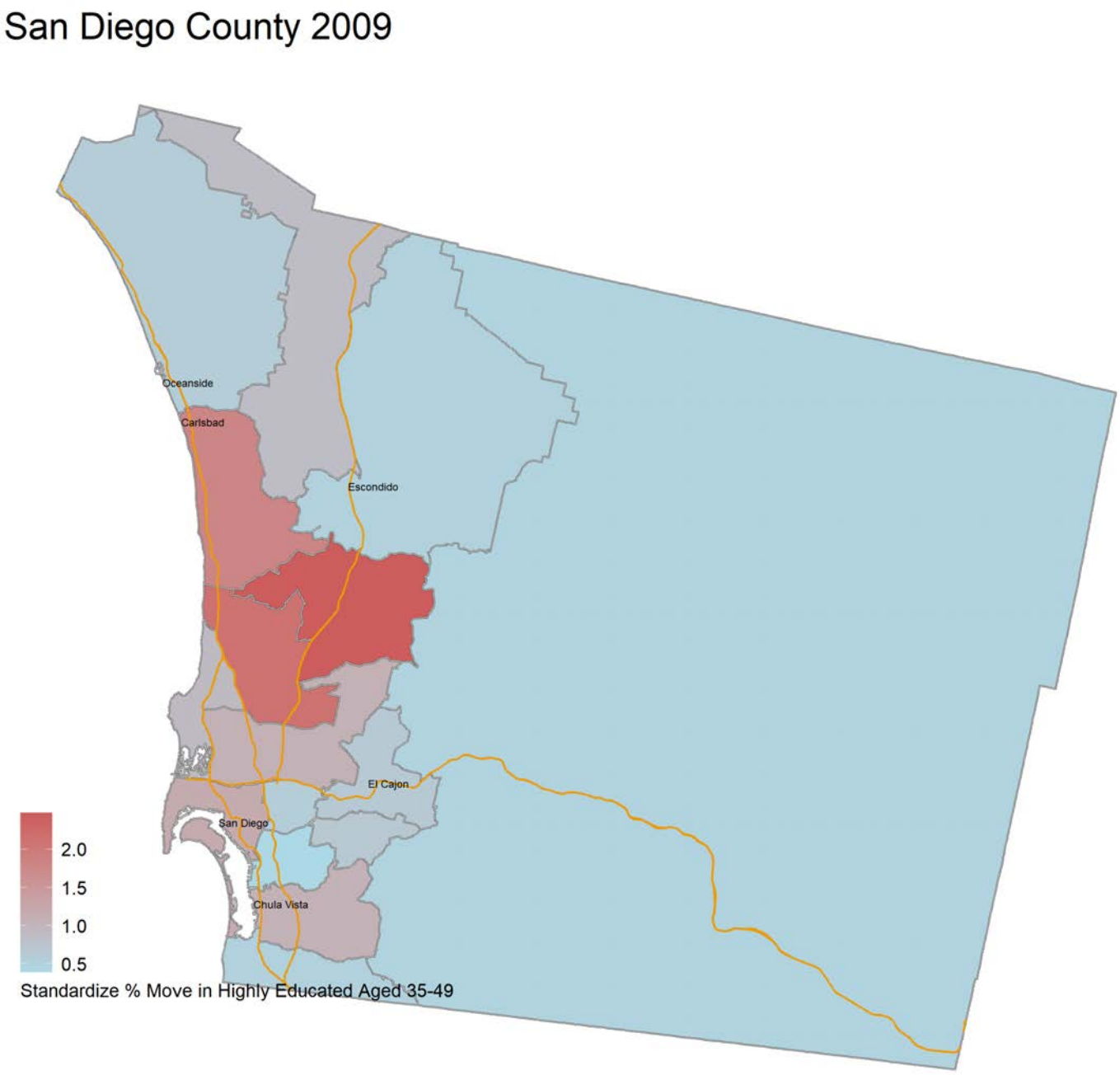


Figure 4.31 Ratio of in-movers to out-movers of highly educated 35-49 year olds in San Diego County PUMAs, 2009

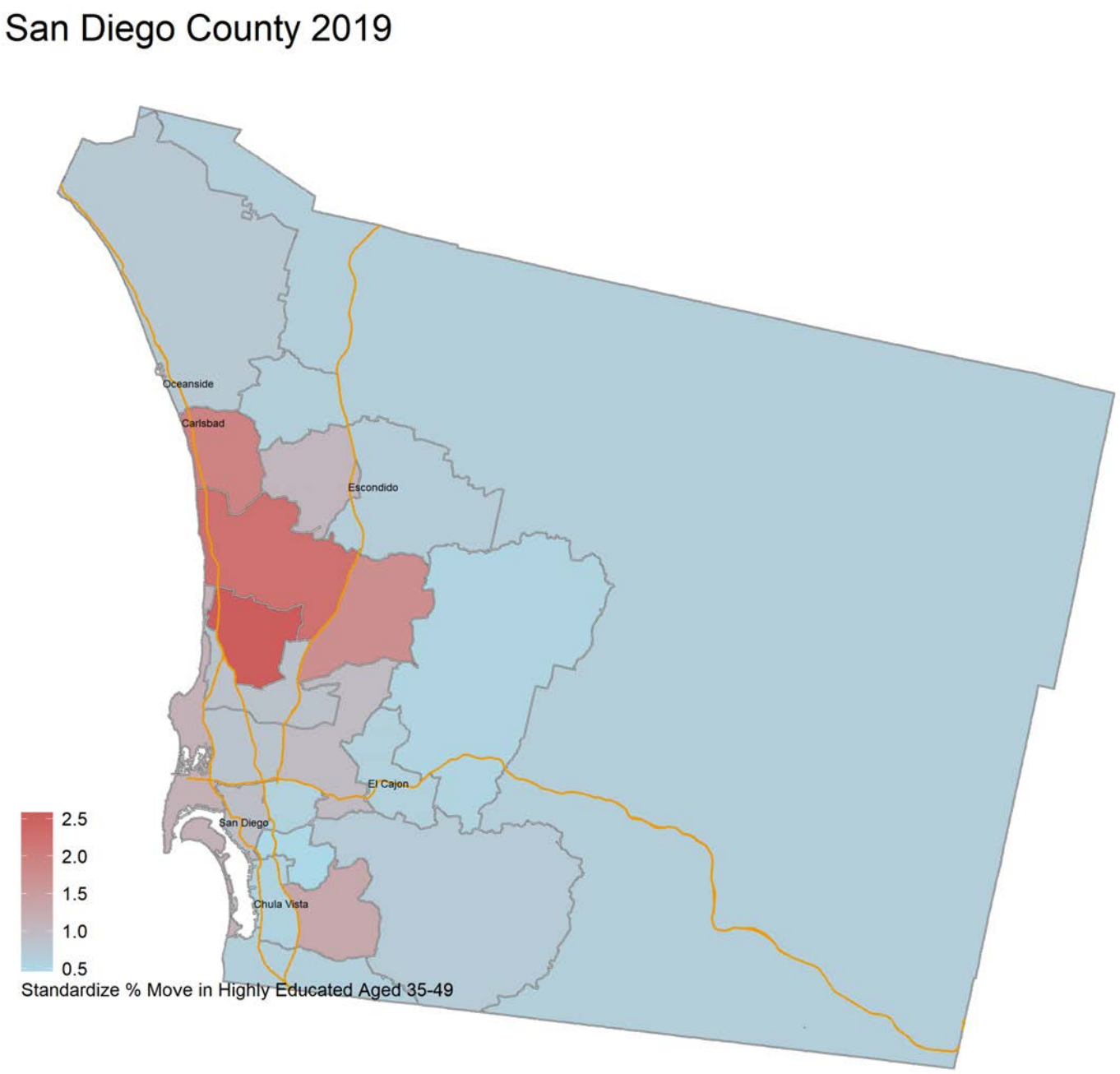


Figure 4.32 Ratio of in-movers to out-movers of highly educated 35-49 year olds in San Diego County PUMAs, 2019

Age 50-64

These next four maps (Figures 4.33-4.36) show where in San Diego County older (age 50-64) highly educated persons are moving during the 1980s, 1990s, 2000s, and 2010s. Similar to the pattern for middle-aged highly educated residents, we see that there has been a consistent relatively large inflow of highly educated older residents to northern San Diego County, up to Carlsbad along the coast, and below Escondido in the inland area. In the two earlier decades there was a relative inflow of this group to the Mission Bay-Pacific Beach-La Jolla area, but that has faded in the two most recent decades.

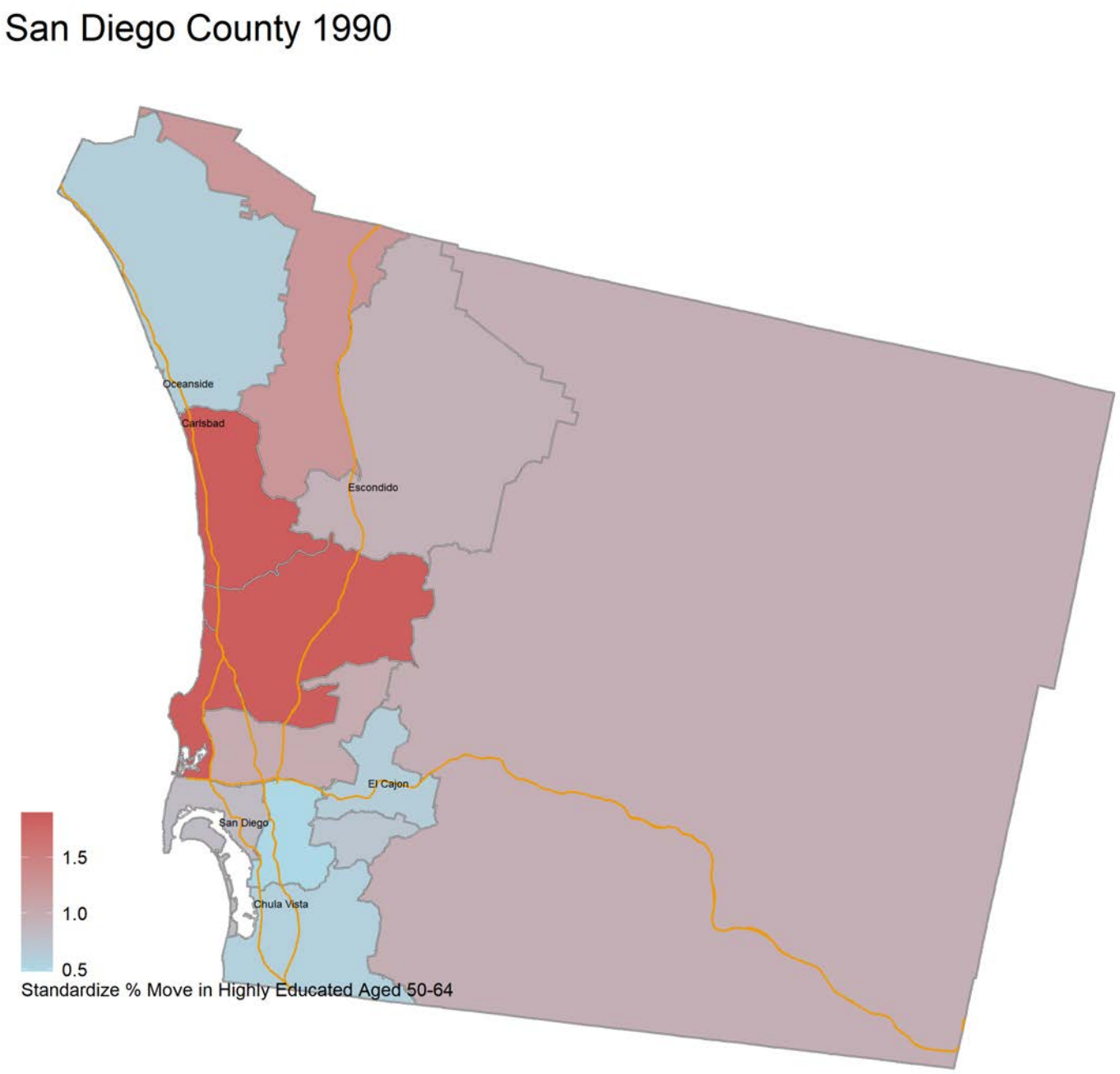


Figure 4.33 Ratio of in-movers to out-movers of highly educated 50-64 year olds in San Diego County PUMAs, 1990

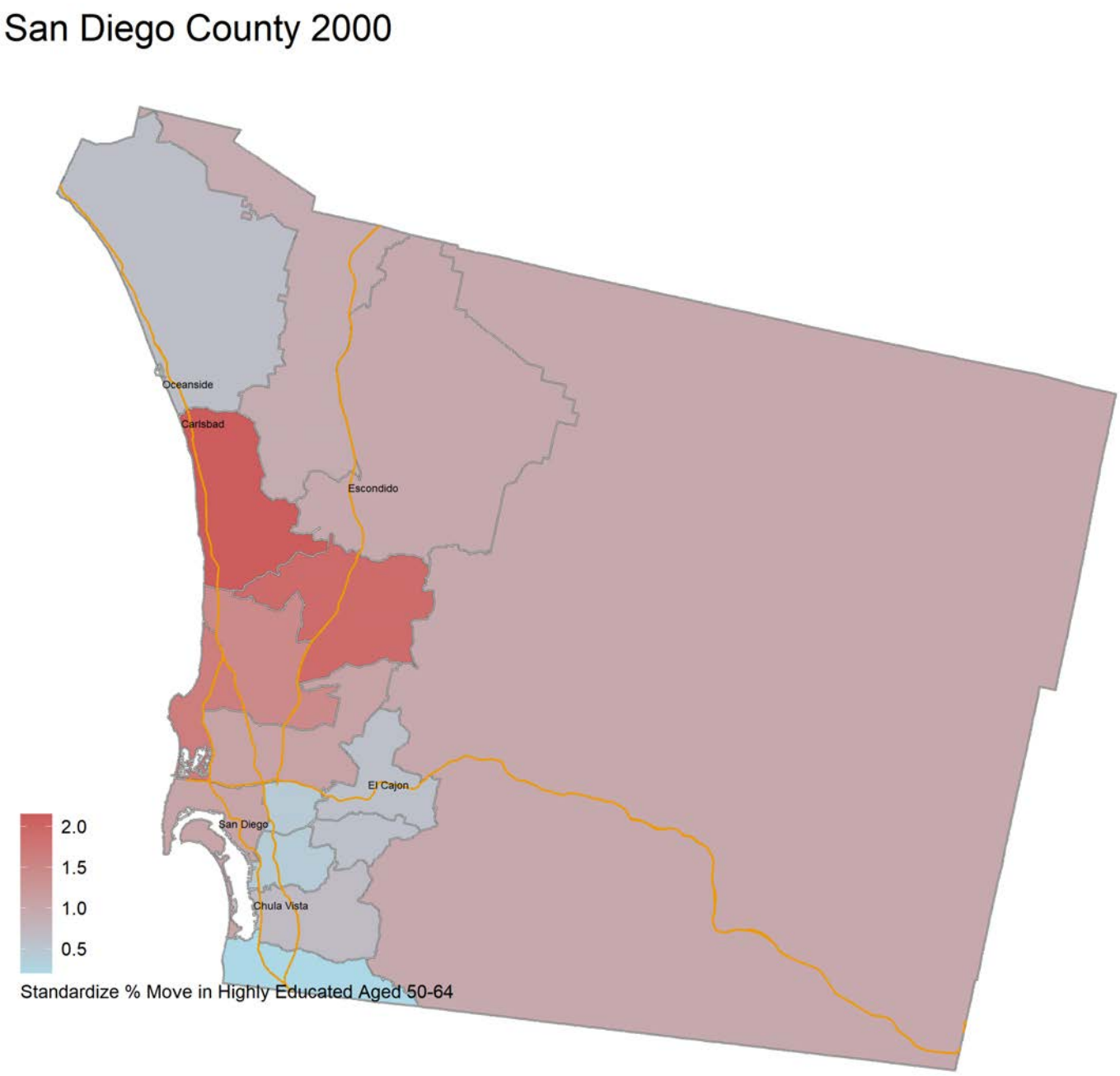


Figure 4.34 Ratio of in-movers to out-movers of highly educated 50-64 year olds in San Diego County PUMAs, 2000

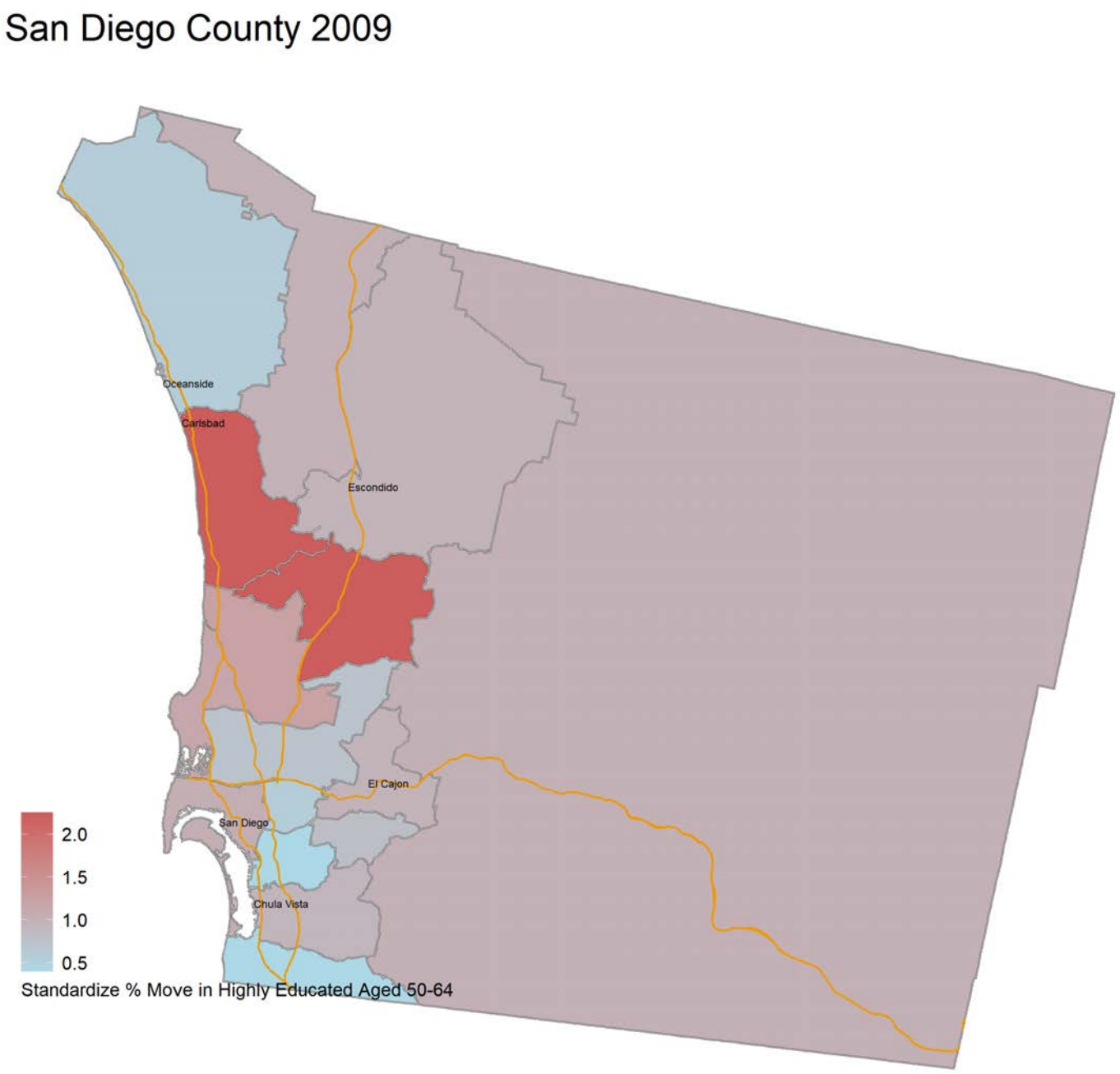


Figure 4.35 Ratio of in-movers to out-movers of highly educated 50-64 year olds in San Diego County PUMAs, 2009

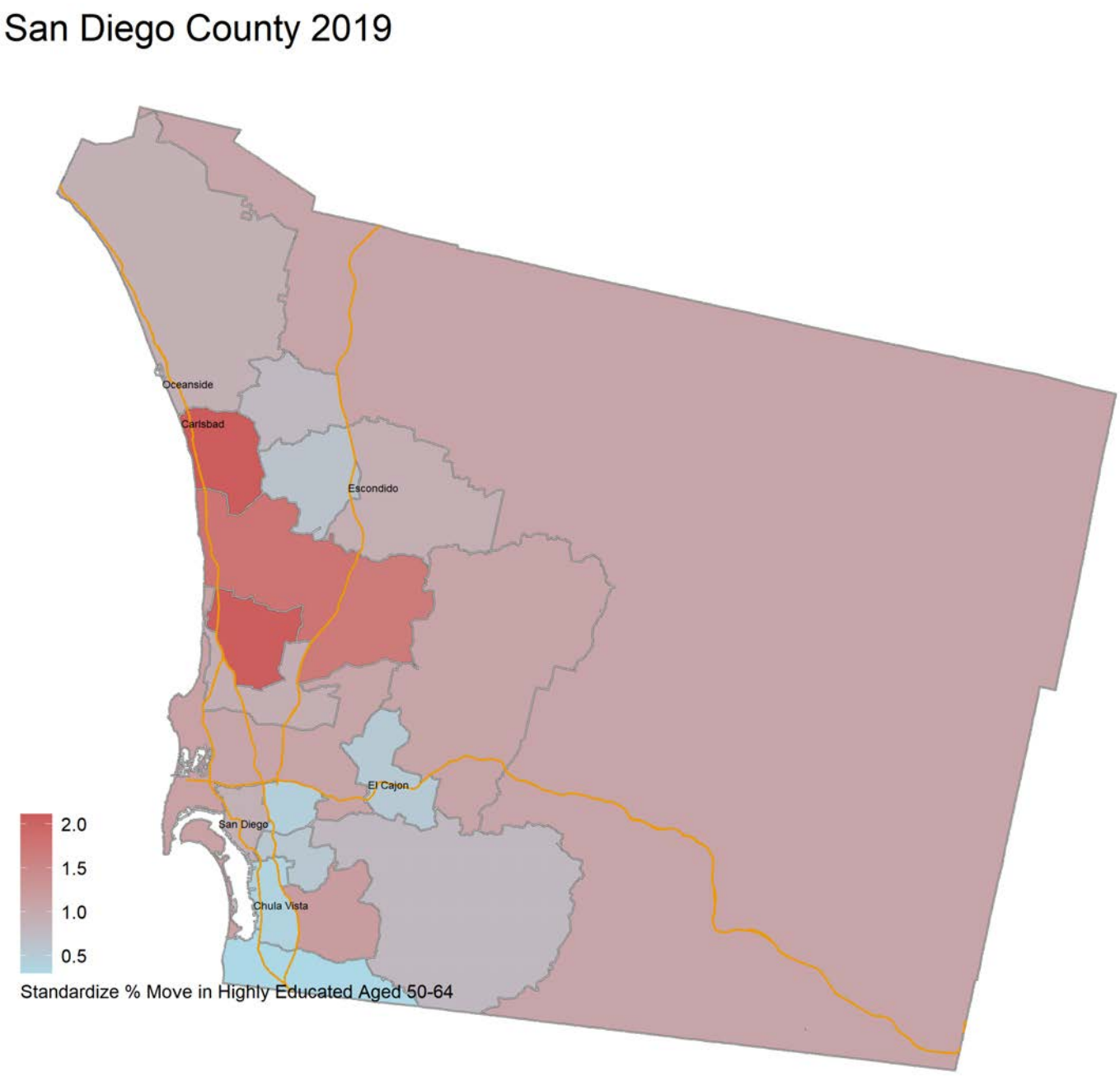


Figure 4.36 Ratio of in-movers to out-movers of highly educated 50-64 year olds in San Diego County PUMAs, 2019

Chapter 5:
Conclusions

The economic potential of a region depends, at least in part, on having a relatively skilled workforce. As a consequence, the presence of a substantial number of residents with high levels of formal education (at least a Bachelor's Degree) is likely important. One implication of this is that providing educational opportunities for the citizens can raise the productivity and wages of all workers in an area. Nonetheless, in the short-term an area can benefit economically if they can import highly educated workers through migration flows. Conversely, even if an area provides educational opportunities to its citizens, losing highly educated workers through mobility can be economically costly as the loss of a skilled workforce can make it difficult to attract firms to the region. Thus, this is a two-way process: the presence of highly educated workers is needed to attract firms, but the presence of firms is also necessary to keep highly educated workers in the region rather than fleeing to other locations with better economic opportunities.

For all of these reasons, we have focused on the migration flows of highly educated residents over the last four decades in this Report. This allowed us to determine if there are any changes or trends in these flows. We were also able to assess which locations consistently receive—and which locations consistently lose—such highly educated residents. We described these migration patterns between counties throughout the state of California. We also zeroed in on migration flows between PUMAs in the southern California region to provide insight into the locations that are receiving relative large—or small—inflows of highly educated residents.

Some results were not surprising, such as the finding that San Francisco County receive the largest percentage of highly educated residents, and this inflow has even increased more recently. It was notable that Alameda County has seen a sharp increase in highly educated residents during the 2010s, which may be evidence of gentrification in that county. A particularly unexpected finding was the evidence that Imperial County has experienced a relatively large inflow of highly educated residents—particularly older and younger ones—in the most recent decades. Some of the destinations for older highly educated residents were perhaps somewhat surprising, including Madera County more consistently and Tulare County in the most recent decade. And Shasta County has generally experienced a relative inflow of middle age highly educated residents

A challenge for some counties is the loss of highly educated residents. Humboldt County in the northwest and San Luis Obispo County along the central coast have consistently experienced a relative outflow of young highly educated residents (when comparing the proportion moving in versus the proportion moving out), which is a particular challenge for these two counties. Kings County has likewise experienced a relative outflow of middle aged highly educated residents based on these relative proportions.

In Southern California, we found that the relatively large inflow of young and middle-aged highly educated residents to Ventura County in earlier decades has faded more recently. Nonetheless, they continue to receive a relative inflow of older highly educated residents. While Orange County has consistently experienced a relative inflow of middle-aged highly educated residents, the relative inflow of younger highly educated residents has weakened in the two most recent decades, which may be a reflection of the high cost of housing. In contrast, there has consistently been a strong inflow of young highly educated residents into Los Angeles County. However, Los Angeles County experienced a relative outflow of older highly educated residents in earlier decades.

The Inland Empire has the challenge of attracting high education residents. San Bernardino County has consistently experienced an overall relative outflow of highly educated residents, although they are doing better in attracting middle aged highly educated residents more recently. It is interesting to note that Riverside has been successful in consistently attracting the relatively largest inflow of older highly educated residents in the region, but less so for younger or middle aged residents.

These flows of highly educated residents were also found into specific neighborhoods. Some of these neighborhoods consistently received a large inflow of highly educated residents over time, which is consistent with a study showing the increase in occupational segregation across Southern California neighborhoods from 1980 to 2010.[1] This rising occupational segregation is arguably reinforced by these migration flows in which highly educated residents tend to be attracted to the same neighborhoods over time. The fact that this spatial segregation is increasing over time is of concern, and something that regional officials will need to address to avoid the problem of some neighborhoods becoming locked into a disadvantaged cycle of low-quality jobs.

Finally, we asked about the race/ethnicity of highly educated residents moving into the counties of the Southern California region. Perhaps unsurprisingly, Orange County has consistently experienced one of the largest relative inflows of Asian highly educated residents over time. Los Angeles County has consistently experienced a relative inflow of Latino highly educated residents, as well as Black highly educated residents in recent decades. San Diego County experienced a relative inflow of Asian highly educated residents in earlier decades, but a relative outflow of Black highly educated residents until the most recent decade. Perhaps surprising is that Ventura County has consistently experienced one of the largest relative inflows of Latino highly educated residents over time. In the Inland Empire, San Bernardino County has consistently experienced a relative outflow of White highly educated residents. And although the Inland Empire experienced relative inflows of Black highly educated residents in earlier decades, that has diminished more recently.

These flows of highly educated residents are important for counties and cities as they provide the human capital important for areas to attract, and retain, industries providing high quality jobs. In part, these flows can be impacted by the presence of attractive jobs at locations. However, these flows can also be impacted by the cost of housing in an area, and thus the housing challenges of the region are intricately intertwined with some of the patterns we have observed. Resolving these issues will be an ongoing challenge for the region.

[1] Hipp, John R. and Jae Hong Kim. 2021. "Income Inequality and Economic Segregation in Los Angeles from 1980 to 2010." Pp. 371-387 in *Urban Socio-Economic Segregation and Income Inequality*, edited by M. v. Ham, T. Tammaru, R. Ubareviciene, and R. Ubareviciene. New York: Springer.

Technical Appendix A: Data Sources Used

- We used U.S. Census public use microdata series (PUMS) across four decades. The 1990 data was obtained from the data repository at ICPSR.
- The 2000 U.S. Census PUMS data, as well as the American Community Survey (ACS) 5-year data for recent years (2005-09; 2010-14; 2015-2019) was obtained from the U.S.
  Census ftp site: https://www2.census.gov/programs-surveys/acs/data/pums/
- For all computations, we weighted cases based on the household-level weights provided by the U.S. Census.

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