

## Where We Stand (WWS): Case Studies

**Purpose:** This is a part of a series of working papers that serve as a basis for strategic conversations about what a successful St. Louis looks like and how we will get there. The regions of focus in the case studies were chosen because they are often thought of as successful regions or there is something specific that made the region worth a closer look.

Preamble, from [WWS9](#):

When someone sees something admirable in another region that may be lacking in St. Louis, it is common for them to ask: What are they doing that we're not? It is not a straightforward task to demonstrate causality in accounting for differences in socioeconomic outcomes. Moreover, it is not always clear what led to a given outcome. Local outcomes are influenced by national trends and policies, presence of natural amenities, and in some cases, the luck of having a pioneer firm in a growth industry. Nonetheless, it is important to take a close look at how specific regions came to experience specific outcomes, to weigh the influence of local decisions, and to ask whether effective decisions in other regions can be emulated here.

*Have something to add to the discussion on this region? Please email us at [wws@ewgateway.org](mailto:wws@ewgateway.org)*

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### Case Study: Riverside

**Version:** Revised November 2024

*\* This is a living document that will be updated periodically. Check for updates at [www.ewgateway.org/wws](http://www.ewgateway.org/wws)*

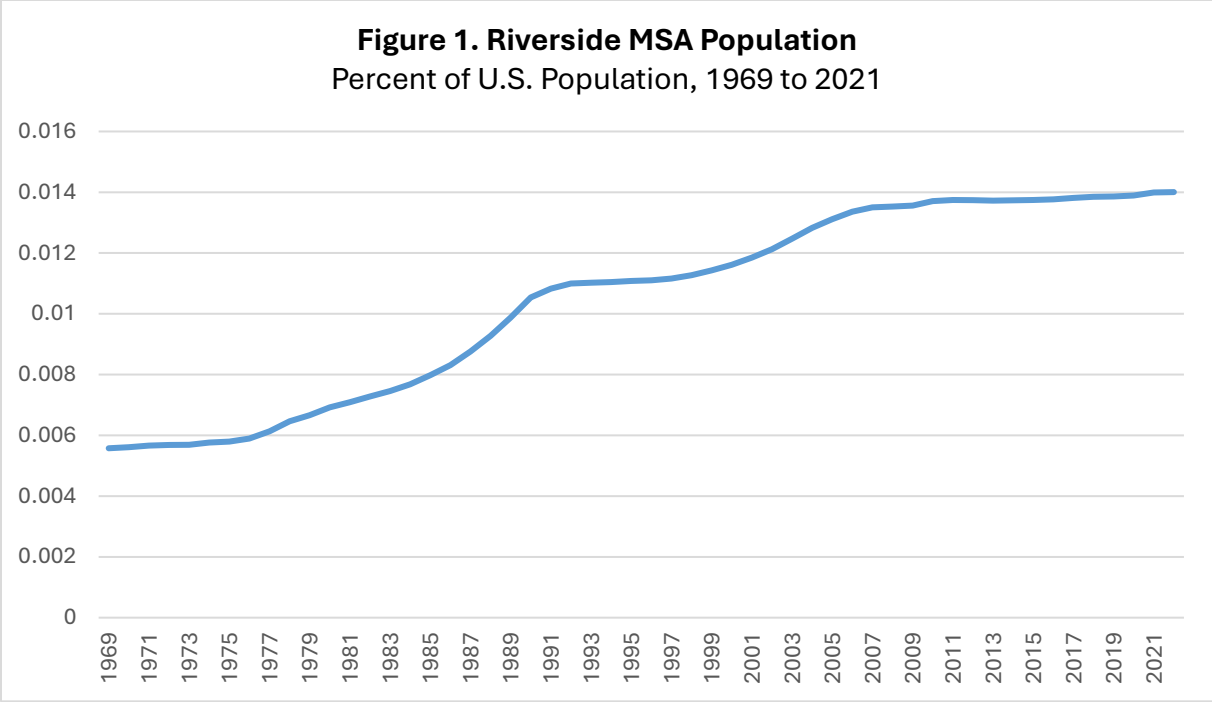
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The Riverside Metropolitan Statistical Area (MSAS) had the 5th highest rate of job growth among the 50 peer regions from 2010 to 2023. Yet, its population growth has slowed in recent years, it has the lowest per capita income of any of the peer regions (as of 2022), the region's income growth has consistently lagged that of the United States since the 1970s, and the region faces unhealthy air quality.

This case study provides a brief overview of the change in employment, population, and income in the Riverside MSA over the several decades.

#### **Riverside compared to the United States**

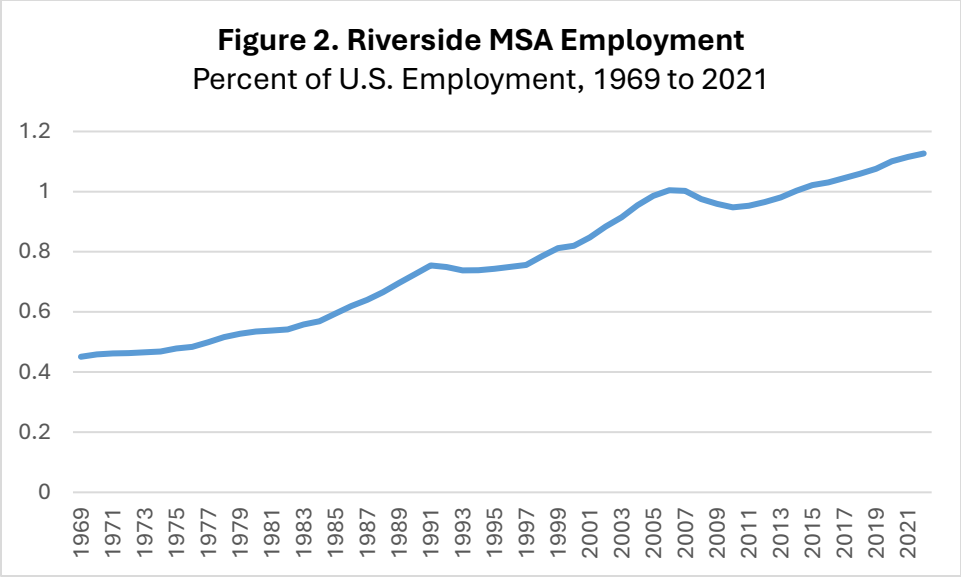
Figure 1 shows the percentage of U.S. population that resides in the Riverside MSA. From 1969 to 2010, Riverside's share of U.S. population more than doubled. Since 2010, it has grown at about the same rate as the United States as a whole.



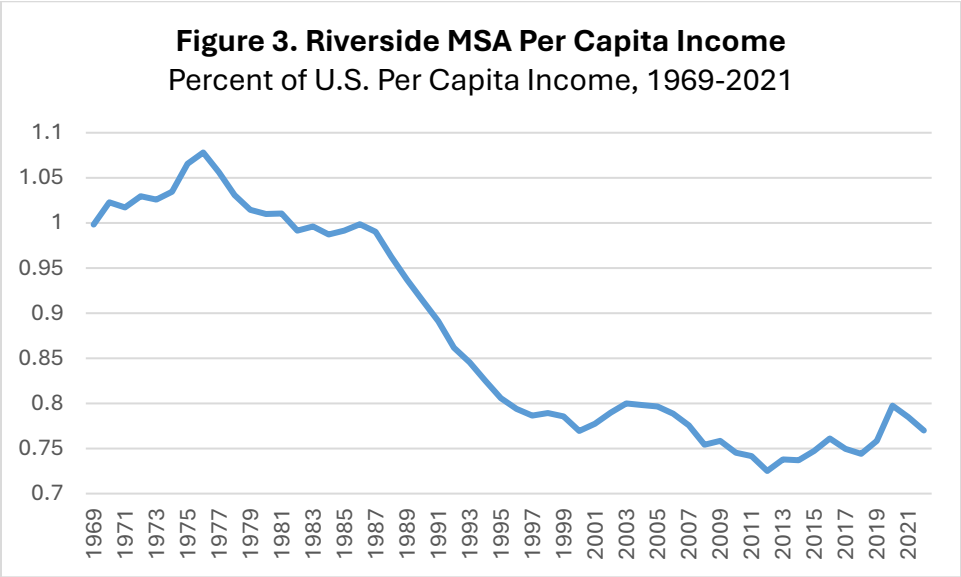
Source: Bureau of Economic Analysis, Table CAINC30

Figure 2 shows Riverside’s share of U.S. employment over the same period. From 1969 to 2006, Riverside’s share of jobs more than doubled, as its employment levels grew faster than the United States. Riverside’s job growth fell below U.S. levels during the Great Recession, from 2006 to 2010. Since then, however, Riverside’s employment has grown 45.9%, more than double the U.S. rate of 19.7%.

Despite its success in increasing employment levels, Riverside’s per capita income has fallen further behind the United States. Figure 3 shows that Riverside’s per capita income was 7.8% higher than the United States in 1976. The region’s income levels fell over the next four decades, declining to just 72.5% of the U.S. average in 2012. Since 2012 its levels have risen somewhat, although Riverside’s per capita income is still just 77% of the U.S. average. In 2022, Riverside’s per capita income was the lowest of the peer regions.



Source: Bureau of Economic Analysis, Table CAINC30

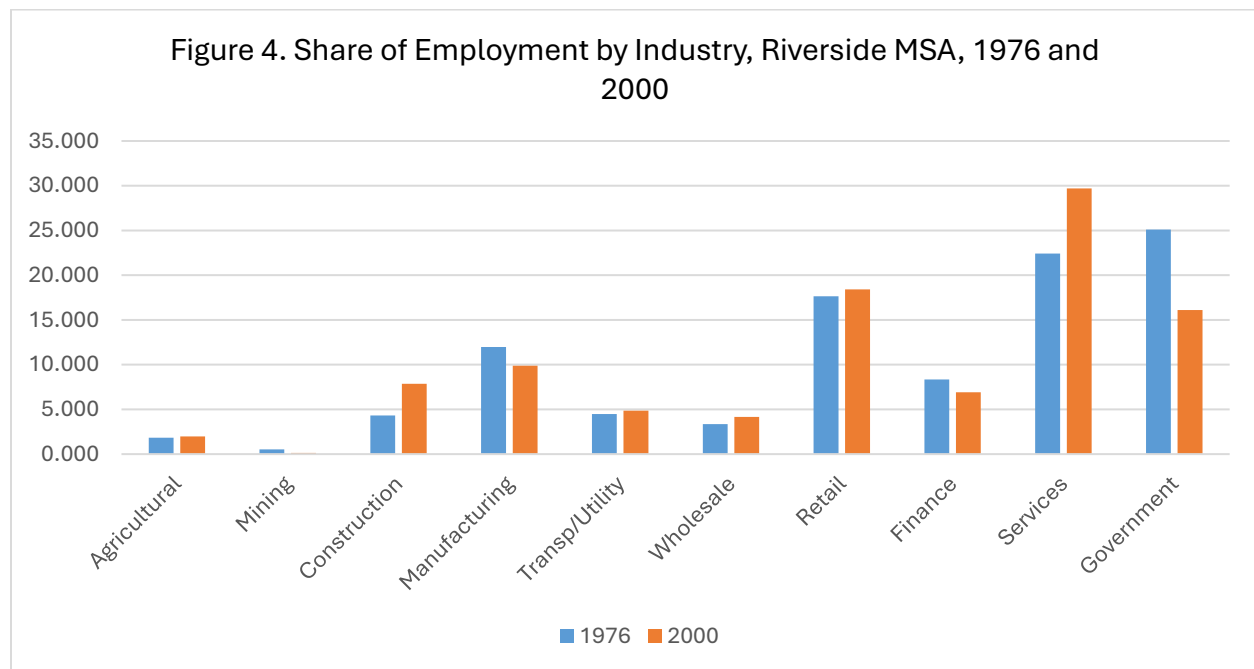


Source: Bureau of Economic Analysis, Table CAINC30

**1976-2000**

Although population in Riverside continued expanding in the last quarter of the 20<sup>th</sup> century, many of the industries that formed the region’s economic base faced retrenchment. In 1976, Riverside’s per capita income was 7.8% higher than the U.S. per capita income. By 2000, per capita income in Riverside was 23.1% lower than the national average.

Figure 4 shows changes in employment by industry from 1976 to 2000. Declines in employment share can be seen in manufacturing, finance, and government. Increasing shares are most notable in construction, retail, wholesale, and the broad “services” industry.



Source: Bureau of Economic Analysis Table CAEMP25S

The Bureau of Economic Analysis (BEA) divides income into three components: earned income, financial income (such as dividends, interest, and rent), and transfer income (such as Social Security and other government benefits). A drop in earnings per capita relative to U.S. per capita income accounted for two thirds of Riverside’s relative decline in per capita income (see the appendix for details on this calculation). The end of the Cold War affected high-wage jobs in Riverside. With the closure of Norton and George Air Force bases, military employment declined by about 7,500 from 1976 to 2000.<sup>1</sup>

Detailed data on employment by industry are not available for the region. However, some detailed information on earnings by industry are available. These data provide clues into Riverside’s declining income levels relative to the United States in the late 20<sup>th</sup> century. The end of the Cold War also adversely affected the aerospace industry in southern California.<sup>2</sup> The primary metals manufacturing industry is a major supplier to the aerospace industry and was a leading provider of high-wage jobs in Riverside in the 1970s.<sup>3</sup> In inflation-adjusted terms, total earnings in the primary metals industry in Riverside declined 60% from 1976 to 2000. Data on

<sup>1</sup> State of California Legislative Analyst’s Office, 1998. Trends in the Southern California Economic Region. [https://lao.ca.gov/1998/0998\\_regional\\_econ/0998\\_regional\\_economic\\_part2.html](https://lao.ca.gov/1998/0998_regional_econ/0998_regional_economic_part2.html)

<sup>2</sup> Peltz, James F., 1993, As Defense Cuts Deepen, Southern California’s Aerospace Industry Is Down but Not Out. Los Angeles Times, September 26. <https://www.latimes.com/archives/la-xpm-1993-09-26-fi-39249-story.html>; Vartabedian, Ralph, 1990, Aerospace Retrenching in Los Angeles. Washington Post, May 13. <https://www.washingtonpost.com/archive/business/1990/05/13/aerospace-retrenching-in-los-angeles/4e7d5771-4ee2-421f-a331-ad37557fcafa/>

<sup>3</sup> Cooper, Christine et al., 2016, The Changing Face of Aerospace in Southern California. Institute for Applied Economics, Los Angeles County Economic Development Corporation. [https://laedc.org/wp-content/uploads/2016/03/LAEDC\\_Aerospace\\_FINAL\\_20160331b.pdf](https://laedc.org/wp-content/uploads/2016/03/LAEDC_Aerospace_FINAL_20160331b.pdf)

earnings in the aerospace industry in Riverside is more difficult to obtain. The most detailed industry breakdown available includes aerospace in the “other transportation equipment” manufacturing industry, and data for this industry are not available for years prior to 1988. Even so, the change in earnings in this industry in the last 12 years of the 20<sup>th</sup> century is dramatic. In inflation-adjusted terms, total earnings in the other transportation equipment industry fell by 55% from 1988 to 2000.

## **2001-2022**

Employment levels in Riverside have risen rapidly in recent years, with the transportation and logistics industry driving much of the growth. The growth in jobs has had tradeoffs and, on average, has not resulted in high wages for the population.

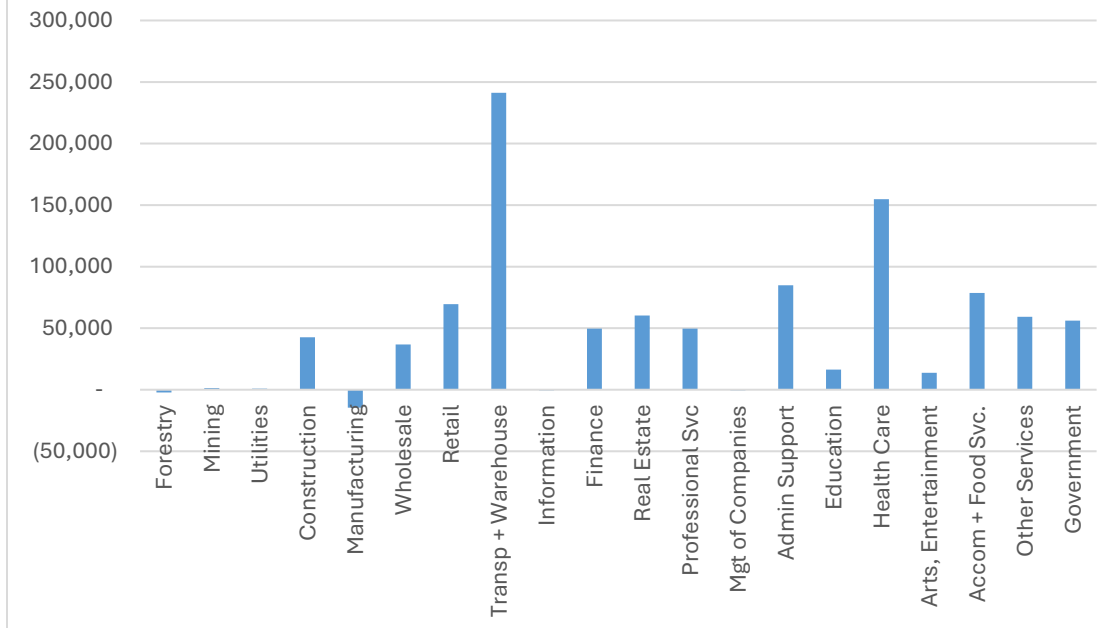
Figure 5 shows change in employment by industry for from 2001 to 2022 for the Riverside MSA. Transportation and warehousing accounts for nearly a quarter of all job growth in this period. From 2001 to 2022, employment in this industry increased by more than 240,000 jobs. Over 40% of the employment gain in transportation occurred since 2019. The pandemic accelerated the trend toward online ordering for home delivery, resulting in a dramatic increase nationwide in transportation-related employment. Riverside epitomized this trend.<sup>4</sup>

Like the rest of the country, Riverside experienced an increase in employment in health care and social assistance over the last 20 years. This industry accounts for 15.6% of employment gains in Riverside since 2001. Other industries that accounted for at least 7% of Riverside’s job growth included administrative support, an industry group that includes employment services, accommodation and food services, and retail.

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<sup>4</sup> Diaz-Gutierrez, Jorge Manuel, et al., 2023, COVID-19 Impacts on Online and In-Store Shopping Behaviors: Why They Happened and Whether they Will Last Post Pandemic, Transportation Research Record, 20(8), March 17. [https://pmc.ncbi.nlm.nih.gov/articles/PMC10020860/#:~:text=While%20online%20purchasing%20had%20already,%25%20in%202018%20\(8\).](https://pmc.ncbi.nlm.nih.gov/articles/PMC10020860/#:~:text=While%20online%20purchasing%20had%20already,%25%20in%202018%20(8).)

Figure 5. Change in Employment, 2001 to 2022, Riverside MSA



Source: Bureau of Economic Analysis Table CAINC25N

As international trade has expanded over the last 20 years, the Inland Empire region, of which Riverside is a part, has become the warehouse district for the Port of Los Angeles. The region now has a billion square feet of warehouse space with more than 4,000 warehouses. The specialization in transportation and logistics has yielded robust job growth, and 45% of the jobs created since 2019 have been in transportation and warehousing.

However, the region has also incurred costs associated with its specialization in warehousing. The 600,000 truck trips each day create air pollution.<sup>5</sup> In 2020, one day in five had unhealthy air quality. The increase in employment has also not generated rising income levels. Riverside ranked 49th among the 50 peer regions on average wage per job.<sup>6</sup>

A 2023 report by the Sierra Club included the following findings:<sup>7</sup>

- Truck traffic in the Inland Empire region of California generates over 300,000 pounds of diesel particulate matter, over 30 million pounds of oxides of nitrogen, and over 15 billion pounds of carbon dioxide each year.
- Over 600 warehouses surround 139 Inland Empire schools.
- Some 20,000 children have missed 11 or more days of school in San Bernardino and Riverside counties in the last year.

<sup>5</sup> Brennan, Deborah, 2024. Job Killer or Neighborhood Protector? Newsom Signs Warehouse Rules that Divided Inland Empire. Cal Matters, October 25. <https://calmatters.org/economy/2024/09/inland-empire-warehouse-bill/>

<sup>6</sup> Newton, Jim, 2024. California Warehouse Boom Comes with Environmental Costs for Inland Empire. Cal Matters, August 1. <https://calmatters.org/commentary/2023/01/inland-empire-california-warehouse-development/#:~:text=Today%2C%20warehouses%20occupy%20about%201,approval%20from%20a%20local%20government.>

<sup>7</sup> Munoz, Ampara, et al., 2023. A Region in Crisis: The Rationale for a Public Health State of Emergency in the Inland Empire. Sierra Club. <https://calmatters.org/wp-content/uploads/2022/06/State-of-Emergency-Public-Health-Request.pdf>

- Over 367,000 individuals live within a quarter mile of a warehouse. Roughly 60% of these individuals are Hispanic.
- The Inland Empire has the highest concentrations of ground-level ozone in the country. In some census tracts in Riverside County, more than 15% of the population has asthma.
- Diesel exhaust is responsible for about 70% of cancer risk from air pollution. In Ontario, California, a city in the Riverside MSA with a large concentration of warehouses, cancer rates are nearly double the rates in the rest of the San Bernardino basin.

## Appendix: Derivation of Decompositions

Personal income (Y) is the sum of earned income (E), financial income (F), and transfer income (W). In metropolitan region M at time t, this may be expressed as follows:

$$Y_t^M = E_t^M + F_t^M + W_t^M \quad (1)$$

To express this relationship for the United States as a whole, substitute the superscript M with the superscript U.

To allow comparisons across time and space, it is convenient to express  $Y_t$ ,  $E_t$ ,  $F_t$  and  $W_t$  as per capita values divided by U.S. per capita income at time t; these quotients will be represented by the lower-case letters  $y_t$ ,  $e_t$ ,  $f_t$ , and  $w_t$ .

To decompose the difference in per capita income between the United States and a given region, equation 2 may be used:

$$y_t^M - y_t^U = (e_t^M - e_t^U) + (f_t^M - f_t^U) + (w_t^M - w_t^U) \quad (2)$$

Riverside's per capita income (PCI) declined from 108% of U.S. PCI in 1976 to 76.9% of U.S. PCI in 2000. To decompose a change into component parts, equation 3 may be used:

$$\begin{aligned} (y_{t+1}^M - y_{t+1}^U) - (y_t^M - y_t^U) = \\ [(e_{t+1}^M - e_{t+1}^U) - (e_t^M - e_t^U)] + \\ [(f_{t+1}^M - f_{t+1}^U) - (f_t^M - f_t^U)] + \\ [(w_{t+1}^M - w_{t+1}^U) - (w_t^M - w_t^U)] \end{aligned} \quad (3)$$

In equation 3, the first set of brackets refers to the portion of change in relative PCI that is attributable to earnings, the second set of brackets shows the portion that is attributable to financial income, and the third set of brackets shows the portion that is attributable to transfer income.

Table A1 shows how these equations were used. The first line shows that Riverside's PCI went from 1.078 times the U.S. PCI in 1976 to .769 times U.S. PCI in 2000, a difference of -.309. The second line shows that earnings accounted for 67.4% of this change. The third line shows that financial income accounted for 19%, and the final line that transfer income accounted for 13.6% of Riverside's decline in PCI vis-a-vis the United States.

### Table A1



	<b>1976</b>	<b>2000</b>	<b>Difference</b>	<b>Percent of Difference Attributable to:</b>
Per Capita Income Divided by U.S. Per Capita Income	1.078	0.769	-0.309	100.0
Per Capita Earnings Divided by U.S. Per Capita Income	0.741	0.533	-0.208	67.4
Per Capita Financial Income Divided by U.S. Per Capita Income	0.180	0.122	-0.059	19.0
Per Capita Transfer Income Divided by U.S. Per Capita Income	0.157	0.115	-0.042	13.6