

# Have U.S. Light Rail Systems Been Worth the Investment?

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<http://www.theatlanticcities.com/commute/2014/04/have-us-light-rail-systems-been-worth-investment/8838/>



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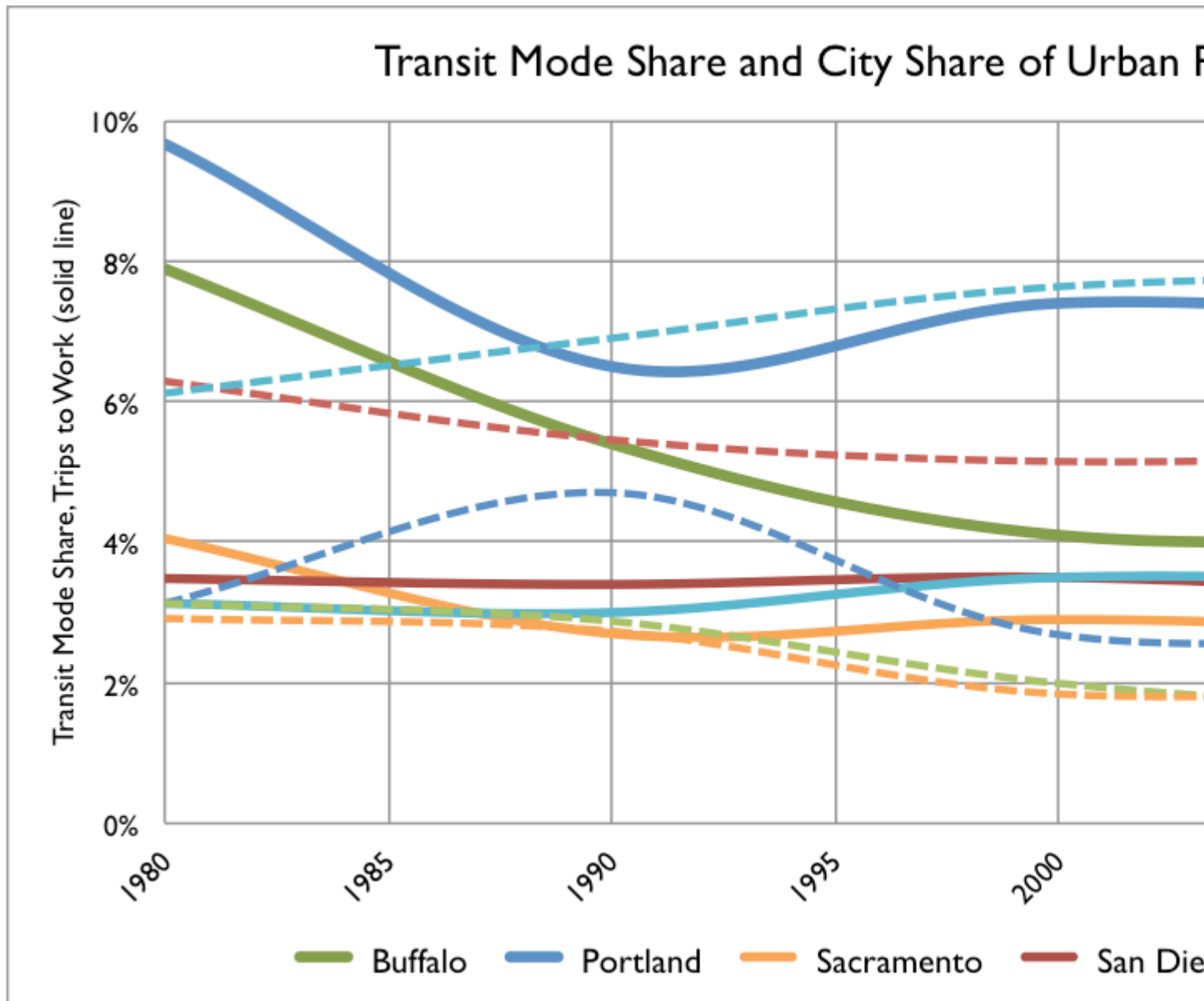
Five U.S. metros (Buffalo, Portland, Sacramento, San Diego, and San Jose) opened light rail systems in the 1980s to great fanfare. The mode offered [many of the benefits](#) of subway systems for far less public money; San Diego's system, per mile, [cost about one-seventh](#) of Washington, D.C.'s Metrorail. Light rail cities like Portland became transportation models for the country, pointing toward a transit-friendly urban future.

Thirty years later, light rail remains the most appealing mode of new public transportation for [many American cities](#). Billions of local, state, and federal dollars have been invested in 650 miles of new

light rail lines in 16 regions, and today [144 miles of additional lines](#) are under construction at a cost of more than \$25 billion. Many more lines are planned. No region has invested in a new heavy rail subway system, on the other hand, since 1993.

Based on the decisions to build these projects, which were made by hundreds of local officials and often endorsed by residents through referenda, you might think that the experience building light rail in the 1980s had been unambiguously successful. Yet it doesn't take much digging to find that over the past thirty years, these initial five systems in themselves neither rescued the center cities of their respective regions nor resulted in higher transit use — the dual goals of those first-generation lines.

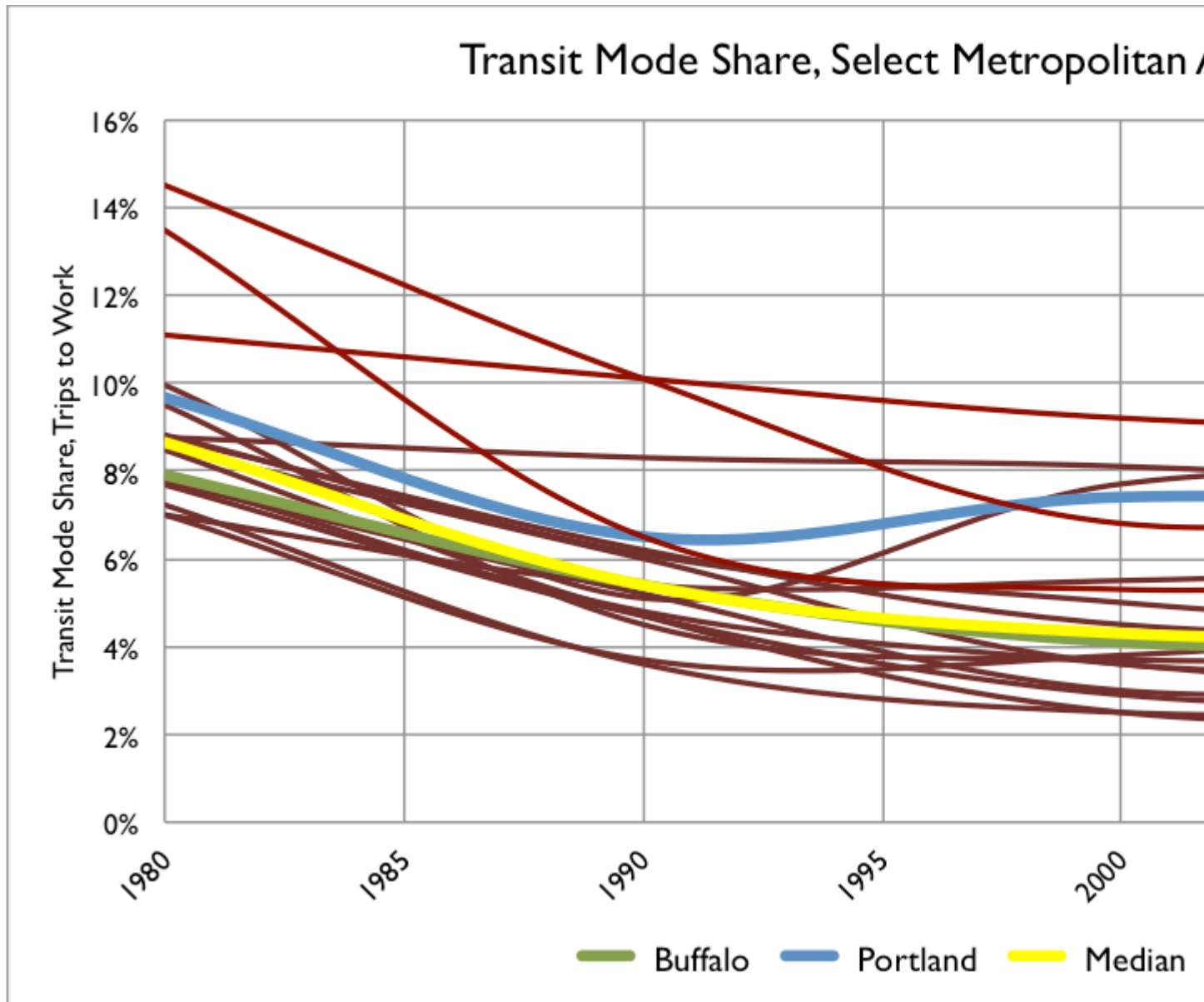
According to an analysis of Census data, in four of the five cities with new light rail lines, the share of regional workers choosing to ride transit to work declined, and the center city's share of the urbanized area population declined, too. San Jose was the only exception, seeing a quarter of a percentage increase in the percentage of workers using transit and a 6 percentage point increase in its center city's share of the urbanized area.



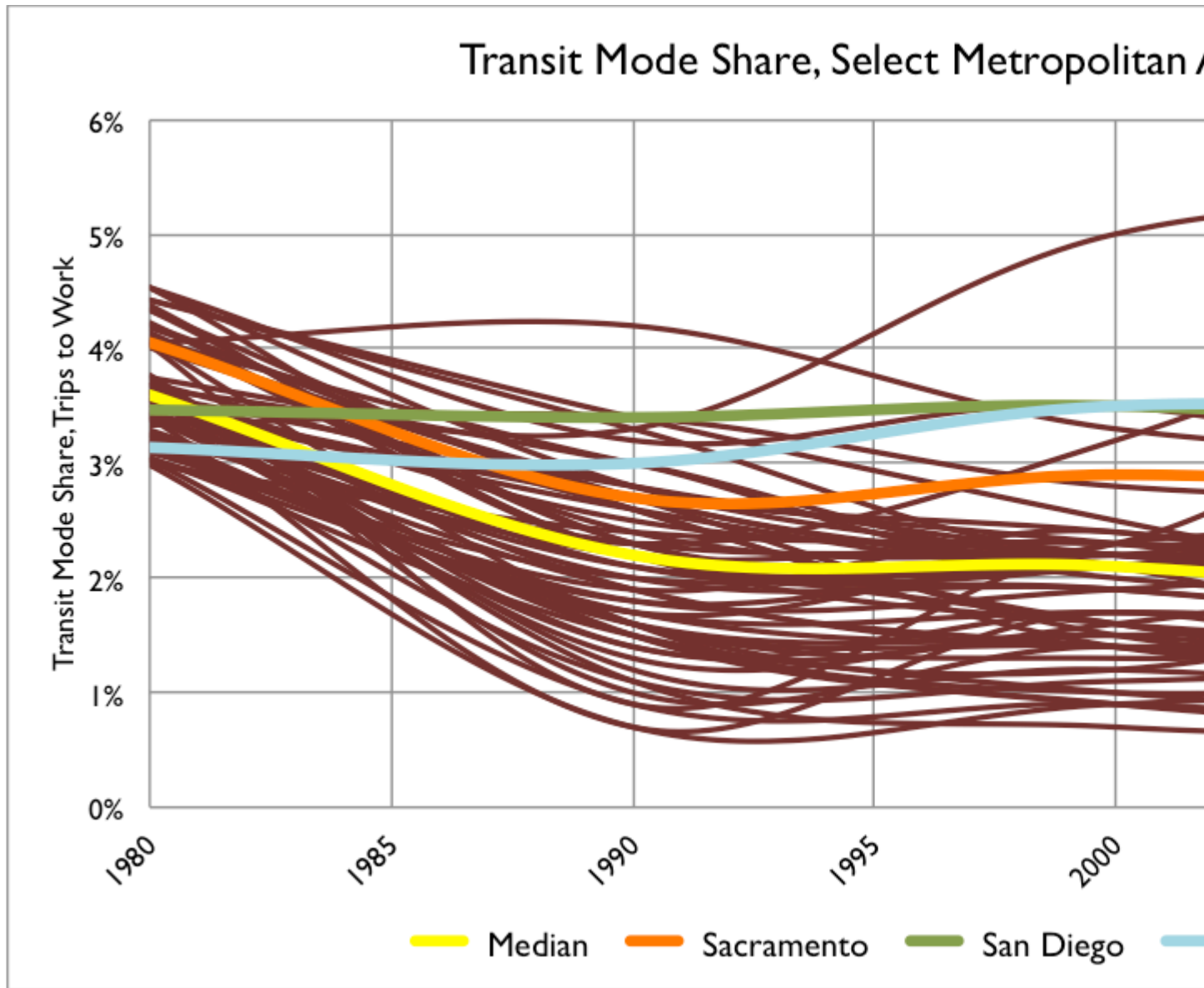
The light rail lines have been useful in [transporting a large portion](#) of transit ridership in the regions where they have been built, carrying more than 39 percent of riders in Portland, Sacramento, and San Diego. But while light rail may appear to make the public transportation system more appealing to the average rider, the construction of such a system will not automatically result in increased transit use. The data from 30 years' experience with the mode in the United States — certainly enough time for the demographic or real estate changes that are usually expected to parallel new rail investments — make that very clear.

Two of the initial light rail metros, Buffalo and Portland, had significantly higher transit mode shares in 1980 (7.9 and 9.7 percent, respectively) than they did in 2012. As shown in the following graph, Buffalo's share of transit commuters fell at a rate very similar to the median of the 15 non-rail cities with transit mode shares of above 7 percent in 1980. Though Portland did better, its ultimate

transit mode share in 2012 was lower than that of Atlantic City, Boulder, Honolulu, and Iowa City — none of which built light rail during this period.

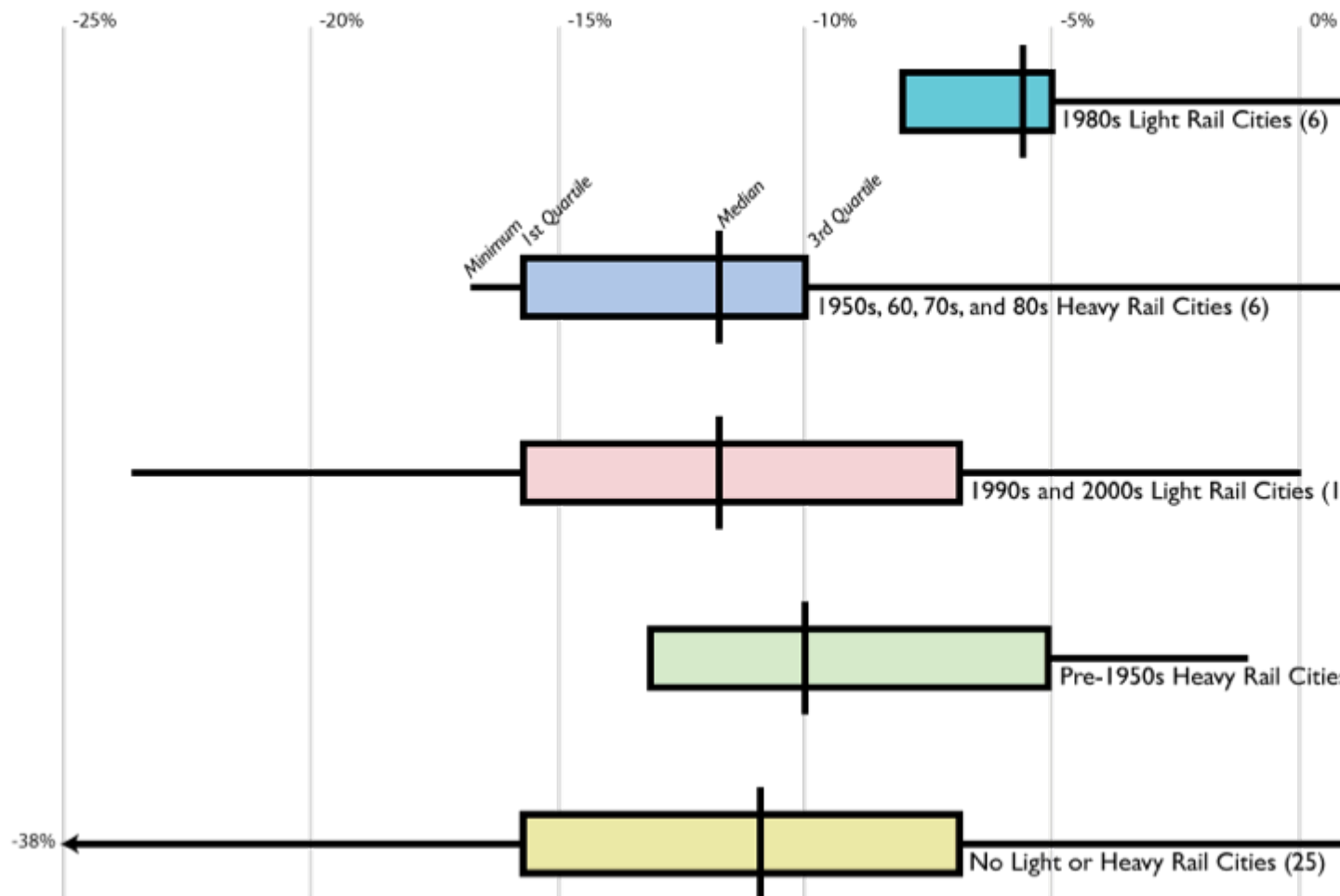


The three other early-adopter light rail cities didn't do much better. Between 1980 and 2012, the transit shares in these light rail cities remained virtually the same (in the case of San Diego and San Jose) or declined only slightly (in Sacramento). They did, however, experience less of a fall than the 61 other metro areas with similar transit shares in 1980, whose median transit mode share declined from 3.6 to just 1.7 percent. (Of this group, only Bloomington, Gainesville, Poughkeepsie, and San Jose actually gained transit share from 1980 to 2012.)



There is one metric by which the metro areas with 1980s light rail investments "thrived" more than others: core population. The following chart documents six early-adopter light rail metros (including Pittsburgh, which updated its streetcar line with a light rail tunnel) against cities that invested in rail during other periods or regions that didn't invest in rail at all. The median 1980s light rail metro saw its center city's share of the urbanized area population decline by just 6 percent by 2012, compared to more than 10 percent for the 45 other regions with populations of more than 500,000 in 1980.

## Change in Center City's Share of Urbanized Area Population, 1980 to 2012



So cities that built light rail during this decade did have some documentable success in aiding their cores. Whether that relative success resulted from light rail is unclear; there are plenty of other urban growth factors that come into play. But light rail may have provided a boost to urban advocates — or, just as likely, the implementation of light rail may have been a result of urban advocacy — that, in turn, led to both overall transit ridership and center city population stability.

How getting from here to there is changing forever.

Even this relatively positive outcome doesn't compensate for the fact that regions that invested in light rail in the 1980s largely failed to increase the share of workers commuting by transit, or to increase the vitality of their center cities with respect to the surrounding regions. Does this mean we should cease investment in new light rail lines? Certainly not; in many cases, rail has provided the essential boost to reinvigorate communities, and in some cases it has also resulted in higher



ridership than before: just look at [Rosslyn-Ballston](#) in the D.C. region or [Kendall Square](#) in the Boston region.

But spending on new lines is not enough. Increases in transit use are only possible when the low [costs of driving and parking](#) are addressed, and when government and private partners [work together](#) to develop more densely near transit stations. None of the cities that built new light rail lines in the 1980s understood this reality sufficiently. Each region also built free highways during the period (I-990 in Buffalo, I-205 in Portland, US 50 in Sacramento, CA 54 in San Diego, and CA 237 in San Jose), and each continued to sprawl (including Portland, despite its urban growth boundary). These conflicting policies had as much to do with light rail's mediocre outcomes as the trains themselves — if not more.

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