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The Federal Transit Boondoggle

Massive Costs, Diminishing Market Share

By Wendell Cox

Wendell Cox

Senior Fellow, Committee to Unleash Prosperity

Executive Summary

The federal transit program, administered by the U.S. Federal Transit Administration (FTA), has been in operation since the 1960s. Principal justifications were to provide mobility to low-income residents, especially those without access to cars, as well as to reduce traffic congestion and air pollution.

Throughout the history of the federal transit program, fiscal burdens have continually increased. Simultaneously, the share of workers using transit for the work trip has fallen substantially. This decline has occurred despite massive federal support for major new transit projects, such as subways, light rail lines and exclusive busways. Moreover, transit expenditures per passenger mile (unit costs) have risen substantially and well above the general inflation rate.

This report based on the most recent transportation and federal transit data through 2024 indicates:

- Despite hundreds of billions of dollars spent on urban mass transit projects throughout the country, a smaller share of Americans, now at 3.8% (or one in 25 workers), use transit than at any time since the federal program began. Three times more Americans work at home today than use transit for commuting.
- Since 1960, 88 million more workers use the roads - either cars or vans - to get to work, while fewer commuters use transit.
- The average travel time to work is 26 minutes for driving versus 48 minutes for transit.
- The latest mobility data across 50 major U.S. metropolitan areas indicates that the average automobile commuter can reach 58 times as many jobs in 30 minutes as the average transit commuter. Even in the New York metropolitan area car commuters can reach more than seven times as many jobs in 30 minutes by car compared to transit. Transit cannot compete with the automobile, principally because it does not provide door-to-door service.
- This decline in ridership has occurred despite massive federal support for almost every new (and expensive) transit system - such as subway projects, light rail lines and exclusive busways.
- A review of 23 new urban rail systems indicates no material progress in improving the market share of transit.

Consequently, the program's benefits have fallen far short of what could have been achieved with more optimal choices. After nearly 60 years of federal support, no major metropolitan area has developed a transit system capable of providing 30-minute job access to more than a small proportion of employment locations for the average worker.

Finally, a consensus is emerging that overall federal spending is far higher than what is sustainable and may require action to avert an existential crisis. Given the urgency to reduce the national debt - now exceeding \$38 trillion, more than six times its level in 2000 - this paper evaluates the federal transit program, focusing on its effectiveness and financial sustainability.

Based on this analysis, it is recommended that the federal transit program be canceled, becoming the responsibility of state and local governments. States and local governments already raise about two-thirds of the operating and capital revenue for transit. In addition, they are subject to far more serious fiscal constraints, such as balanced budget requirements, than the federal government.

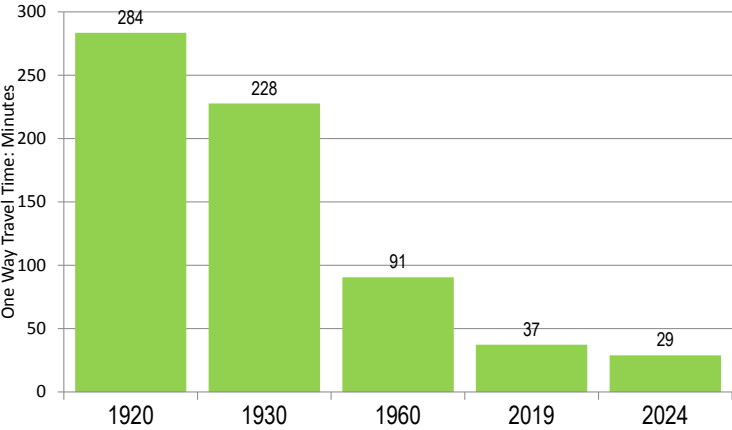
Introduction

Before 1920, nearly all urban travel by motorized vehicles was by transit. During the 1920s, transit trips reached their peak (17.3 billion in 1926), which was only exceeded during World War II. Ridership has generally declined since that time.

By pre-pandemic 2019, unlinked trips had declined to 9.9 billion to the 2024 figure of 7.7 billion. This decline has occurred as the US has grown substantially. The overwhelming majority of transit ridership is in urban areas. Urban per capita ridership dropped by 87% from 1920 to 2019, and 90% by 2024 (Figure 1). Thus, transit ridership has dropped by an order of magnitude over the last century.

According to the Federal Transit Administration, transit trips have a high level of concentration in just eight urban areas (2024). The New York urban area alone accounts for nearly half of the nation’s transit trips (46%), or eight times its population share (less than six percent of the population). Seven more urban areas (Los Angeles, Boston, Chicago, Philadelphia, San Francisco, Seattle, and Washington) combined with New York have 73% of the transit trips. This is more than 3.5 times their share of the US population.¹

Figure 1: Transit Trips per Urban Resident (United States: 1920-2024)



Estimated from USDOT, APTA & Census data.

The federal transit program dates to the 1960s. Initially designed to provide financial assistance to struggling urban transit systems, the program has continuously required substantial increases in financial support. In 2024, federal spending on transit reached \$20.5 billion, reflecting a nearly 50% increase from 2019. However, this expansion in spending has generally not restored pre-pandemic ridership levels, which were already well below transit’s market share when the federal program began about six decades ago.

Given the urgency to reduce the national debt, now about \$38 trillion – more than six times the level in 2000 – this paper focuses on transit’s effectiveness and financial performance.

1 <https://www.transit.dot.gov/sites/fta.dot.gov/files/2025-11/2024%20National%20Transit%20Summaries%20and%20Trends%201.1.pdf>

Objectives of the Federal Transit Program

The federal transit program was designed to achieve important objectives such as:

- Enabling mobility for those unable to afford or drive a car – Public transit was intended to serve the mobility needs of low-income residents, especially those without access to private vehicles.
- Reducing traffic congestion and air pollution – By encouraging drivers to shift from automobiles to transit, policymakers hoped to alleviate urban traffic congestion and improve air quality.

However, for transit to materially contribute to these objectives, its market share would need to be materially increased. As shown below, there is no realistic prospect for this.

Federal and Local Transit Financing

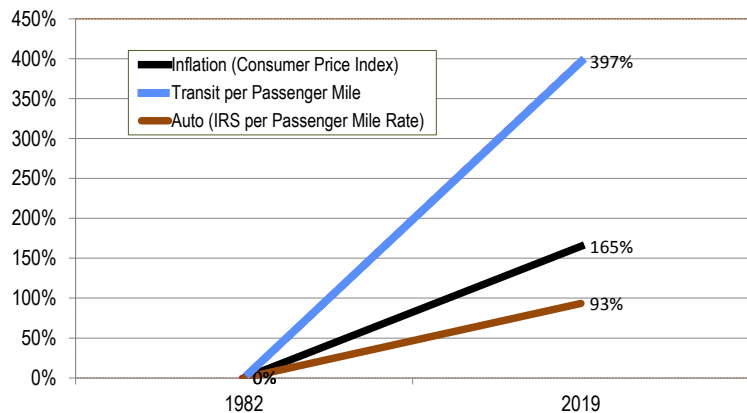
In 2017, federal funding accounted for 34% of total transit expenditures, with state and local governments contributing the remaining 66% (including passenger fares, which are less than 12% of total expenditures).²

Transit spending has increased far faster than inflation. Transit expenditures per passenger-mile rose 397% between 1982 and 2019 (2.4 times the 165% overall inflation (Figure 2)).³ Moreover, transit spending per passenger-mile has grown 4.3 times faster than automobile costs, as measured by the Internal Revenue Service standard mileage rate. During the pandemic period, transit costs continued to rise even as ridership fell sharply, further widening the gap between expenditures and passenger-miles.

Massachusetts Institute of Technology research similarly reports that bus transit costs between 1997 and 2014 increased at 3.2% annually compared to an inflation rate of 2.3%. This indicates costs were 39% above inflation.⁴

The federal government significantly increased transit spending in response to the COVID-19 pandemic, yet transit ridership has not recovered to pre-pandemic levels. The transit

Figure 2: Cost Trends & Inflation: Transit & Autos (1982-2019 per Passenger Mile: Nominal)



Derived from USDOT & Census data (2020 data not representative).

2 Nathan Musick, Government Spending on Public Transportation and Other Infrastructure, <https://www.cbo.gov/publication/58086>.

3 Expenditures are used rather than costs, because annual capital costs (such as depreciation) are not readily available.

4 Annualized cost increases per passenger mile averaged 3.2%, compared to 2.3% for inflation. <https://daneshyari.com/article/preview/7497255.pdf>

industry is now lobbying Congress for a substantial, sustained increase in funding, which would include maintaining the pandemic emergency funding level, despite the fact that the emergency has ended.

By comparison, automobile costs dropped relative to inflation. The Internal Revenue Service mileage reimbursement rate declined from an inflation-adjusted \$0.91 per mile in 1982 to \$0.64 in 2019.⁵

Ridership

Transit ridership has declined despite the increase in public subsidies. In 1960, 12.1% of U.S. workers commuted by transit. By 2019, this figure had dropped to 5.0%, according to American Community Survey data. The pandemic accelerated this decline, reducing transit’s market share to 3.7% by 2024 (Figure 3), a drop of 69%.

Even this figure masks an even smaller transit market share. The 2022 National Household Travel Survey (NTHS) indicates that the number of commuters daily using transit is 20% below the average reported in the American Community Survey (the principal source for such data). This suggests that the reported 3.7% ACS work trip market share is likely under 3.0%.⁶ Automobile use increased dramatically, with car commuters rising from 64% in 1960 to 85% in 2019 (Figure 4).

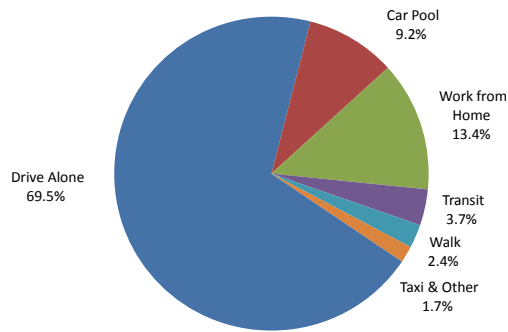
Transit’s decline was exacerbated by the pandemic, as millions of commuters switched to working from home. Many commuters also moved farther away from urban cores to lower-density suburban and rural areas. Between 2019 and 2024, commuters working from home reached 22.0 million, 3.6 times the number of transit commuters. More significantly, this increase in working from home *required virtually no taxpayer subsidy*, in sharp contrast with the substantial transit subsidies.⁷

5 Per the Internal Revenue Service, “The standard mileage rate for business use is based on an annual study of the fixed and variable costs of operating an automobile,” <https://www.irs.gov/newsroom/irs-increases-the-standard-mileage-rate-for-business-use-in-2025-key-rate-increases-3-cents-to-70-cents-per-mile#:~:text=The%20rates%20apply%20to%20fully, costs%20of%20operating%20an%20automobile>

6 National Household Travel Survey, “Summary of Travel Trends: 2022 National Household Travel Survey,” Table 7-3.

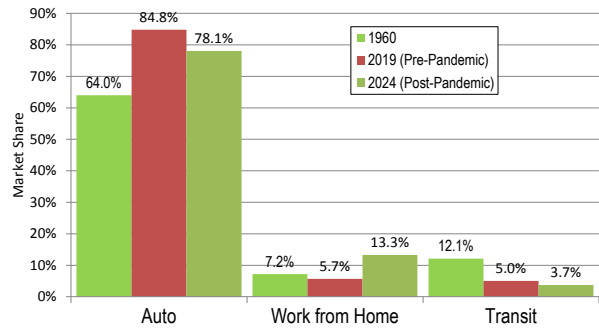
7 The very low occupancy rates in federal buildings in the Washington area as late as early 2025 have given many an unfavorable impression of working from home. Working from home has successfully expanded in the private sector, where competitive influences operate and firms are likely to authorize only when approved by managers with genuine productivity standards. This is much different than the government sector. For example, see: U.S. Bureau of Labor Statistics (BLS), Monthly Labor Review, December 2015 — “Productivity Measurement in the Federal Government: Theory and Practice” (by Lucy P. Eldridge & Michael J. Harper), “Measured productivity growth in the federal government has been consistently below that of the private nonfarm business sector. The absence of market prices and the reliance on input-based measures limit observed productivity gains in government services.”— p. 3. Moreover, despite the well publicized efforts by employers to attract employees back to worksite, the latest data indicates no loss in working from home between 2023 and 2025 (Barrero, Jose Maria, Nicholas Bloom, and Steven J. Davis, 2021. “Why working from home will stick,” National Bureau of Economic Research Working Paper 28731, Jose Maria Barrero, Nicholas Bloom, and Steven J. Davis, 2021, https://wfhresearch.com/wp-content/uploads/2025/02/WFHResearch_updates_February2025.pdf).

Figure 3: Share of Employment Access (2024: By Mode)



Derived from American Community Survey 2024.

Figure 4: Work Access Share: 1960-2019-2024 (U.S.)

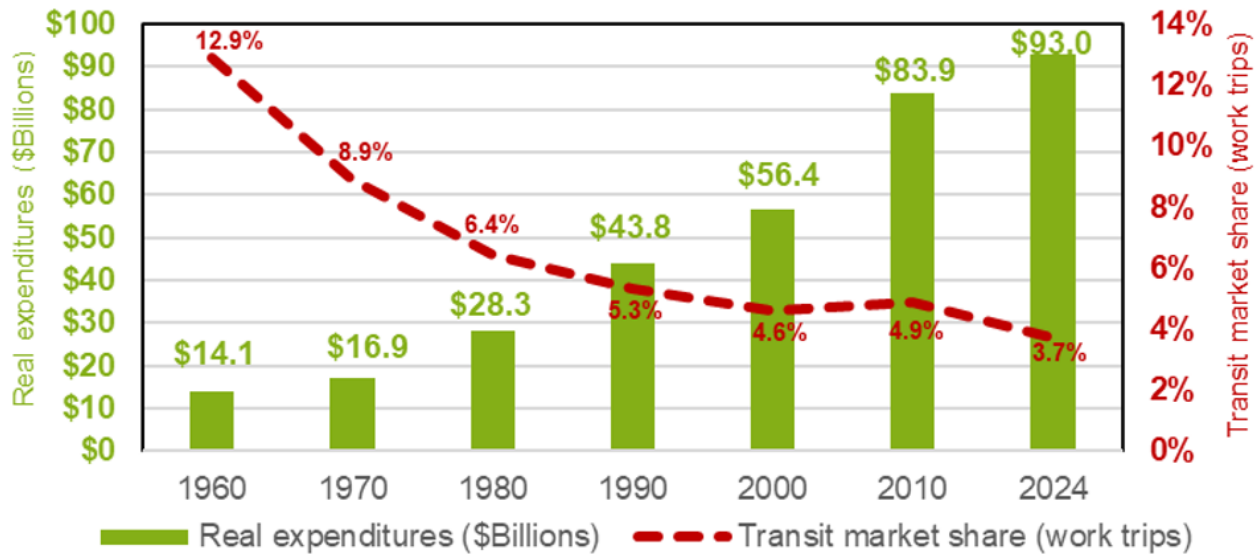


Derived from Census Bureau data.

Ridership & Expenditures

Transit expenditures have risen far above the national inflation rate. Between 1960 and 2024, it is estimated that transit expenditures have risen 6.4 times prices in the economy (Figure 5). This is stunningly more than the loss in work trip market share over the same period.

Figure 5: Transit Spending Has Soared, While Transit Market Share Has Tumbled



Derived from data from the Department of Transportation, American Transit Association, and Census Bureau.

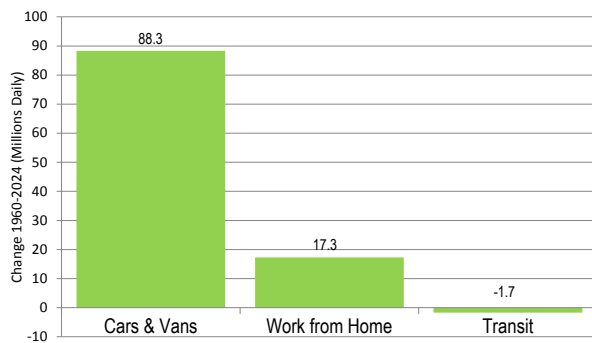
Analysis

Ever since the establishment of the Federal Transit Administration (formerly the Urban Mass Transportation Administration), transit officials and the national media have characterized transit as an alternative to the automobile.

Yet, transit's work trip market share has fallen and is lower than in 1960, the earliest year of federal transit statistics. In 2024, weekday transit commuting was 30,000 below that of 1960, according to Census data. Meanwhile, employment access by auto has increased by 88.3 million trips daily, and those working from home by 17.4 million. Combined, the auto and working from home account for an increase of 105.6 million daily commuters since 1960 (Figure 6).

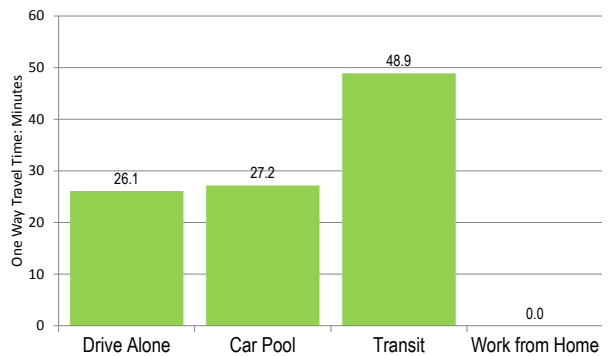
Transit's inability to compete effectively with the car and working from home may largely stem from its slower travel times and far more limited access to jobs.

Figure 6: Change in Work Access Mode (United States: 1960-2024 (Millions of Workers))



Derived from Census Bureau data.

Figure 7: Employment Access Time in Minutes (United States: 2023)



Derived from American Community Survey 2023.

Transit Work Commute Trip Travel Times

Transit commuting times are substantially longer than driving. In 2023, the average transit commute was 48.9 minutes one way, compared to 26.1 minutes for those driving alone. The average carpool travel time was nearly as fast as driving alone, at 27.2 minutes (Figure 7).

Even in the City of New York, which has by far the most comprehensive transit service in the nation, the average commute time for residents driving alone is four minutes faster than the average transit commute (48.3 minutes for driving alone vs. 52.6 minutes for transit). This is despite the fact that the City is served by the most extensive rapid rail system in the United States.

Transit Job Access

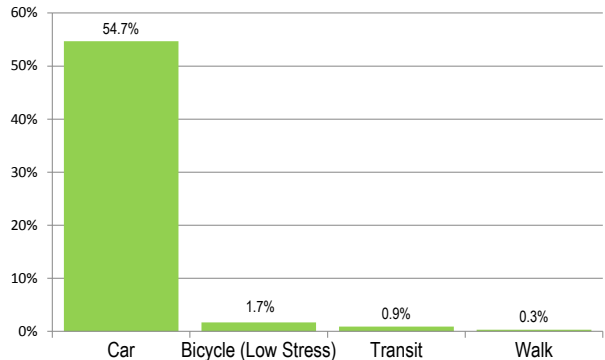
Transit’s limited access to jobs may be the ultimate disadvantage. Economic research associates greater urban area productivity with shorter commute times, all else equal. Higher standards of living tend to be associated with greater urban area productivity.⁸ For example, according to urban economists Gilles Duranton and Diego Puga: “Cities exist because they make workers and firms more productive. These productivity gains are reflected in higher wages and, ultimately, higher standards of living for urban residents.”⁹

Moreover, there is evidence that average work trip travel times have been 30 minutes or less for centuries.¹⁰ Most US employees reach work in less than 30 minutes (Figure, 7, above).

Continuing advances in information technology have made it possible to quantify 30-minute work trip travel times by major labor market (major metropolitan areas) in the United States.

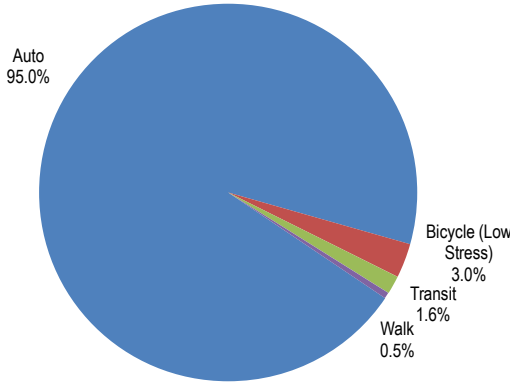
Research by the University of Minnesota’s Accessibility Observatory shows that, on average, workers can reach 58.3 times (5,830%) as many jobs in 30 minutes by car as by transit (Figure 7) among 50 major metropolitan areas (over 1,000,000 population). Put another way, the average major metropolitan area commuter has access to 99% fewer jobs within 30 minutes by transit than by car (Figure 8).

Figure 8: Metro Jobs Accessible in 30 Minutes: 2023 (50 Major Metropolitan Areas, by Travel Mode)



Derived from University of Minnesota data.

Figure 9: Share of Potential 30-Minute Job Access (By Mode)



Derived from University of Minnesota 2023.

8 See, for example: Prud’homme, Remy and Chang-Woon Lee (1998), “Size, Sprawl, Speed, and the Efficiency of Cities,” Paris, France: Observatoire de l’Économie et des Institutions Locales, and David T. Hartgen, Ph.D., P.E. and M. Gregory Fields (2009), *Gridlock and Growth: The Effect of Traffic Congestion on Regional Economic Performance*, Reason Foundation, https://reason.org/wp-content/uploads/files/ps371_growth_gridlock_cities_full_study.pdf.

9 Gilles Duranton and Diego Puga. “Micro-foundations of Urban Agglomeration Economies.” *Handbook of Regional and Urban Economics*, Vol. 4, edited by J.V. Henderson and J.-F. Thisse, Elsevier, 2004, pp. 2063–2117.

10 The 30-minute one-way work trip travel time has been called the Marchetti Constant, described by Italian physicist Cesare Marchetti. Jonathan English, writing in *City Lab*, provides a compelling history from 800 BCE to today.

This far lower access by transit illustrates the ‘first-mile/last-mile effect,’ referring to the portions of a trip required to connect the rider’s origin and final destination to and from a transit stop or station.¹¹ Simply put, most potential trips begin too far from a transit stop for riders to walk from home, and/or end too far from the intended destination – such as the workplace – to walk.

Across the 50 markets analyzed by the University of Minnesota, 30-minute job access is provided principally by the automobile, which accounts for 95 percent of the destinations reachable within that time (Figure 9, above).

Metro New York, with by far the largest transit system in the nation, has the best 30-minute job access. Even so, cars are able to reach 7.8 times as many jobs in 30 minutes for the average New York metro resident as transit (780%). New York’s predominance results from having by far the largest and densest central business district in the nation, which makes it the most favorable destination by transit in the nation (Box 1).

Transit provides considerably less 30-minute employment access to the average commuter in *all major metropolitan areas* (labor markets). Only three major markets have average 30-minute transit access to jobs exceeding 2% (San Francisco, Milwaukee, and Salt Lake City). Two major metros have 30-minute job access *under 0.25%*: Dallas-Fort Worth and Atlanta. This is despite the fact that large new rail systems have been built in both Dallas-Fort Worth and Atlanta, presumably with the intention of increasing transit’s share of commuting. The unweighted average 30-minute transit access among the 50 major metropolitan areas examined was 0.94% (Appendix Table 1).

Transit does not provide mobility that can compete with the auto in travel time or geographic access in any major metropolitan area (labor market). Given the paucity of 30-minute transit access, and more than six decades of experience documented by Census Bureau data, there is no realistic potential for transit employment access to equal that of the auto.

At the same time, the research identified 30-minute job access by transport mode should be formally integrated into major project planning (“new starts” and “small starts”) to compare projected transit and auto job access between considered alternatives.

Box: The Uniqueness of New York City

New York City is very different from the rest of the nation. As the nation’s largest municipality, it has more than double the population of the second largest, Los Angeles. With respect to transit commuting, New York City is even more unique. In 2019, 36.1% of the nation’s transit commuting was to jobs in New York City. This is more than 10 times the share of the US population living in the city (2.5% in 2019). The key to this concentration of transit use is Manhattan (New York County), which had 2.7 million jobs, to which 75.6% of workers (2.1 million) commuted by transit.

However, New York is less unique at the metropolitan area level. In 2023, only 49.1% of the metropolitan area’s jobs were in the city, with 50.9% in the suburbs. Transit commuting is heavily concentrated to jobs in the City, which attracts 93.4% of transit commuting in the metropolitan area.

Transit commuting to the larger number of jobs in the suburbs is more akin to the national rate. In 2024, transit commuting to jobs in the suburbs of New York City was only 3.5%, which is below the national transit market share of 3.7%. Thus, with respect to transit commuting, the suburbs of New York are more like the United States outside New York City than they are like New York City.

11 See: Federal Transit Administration (2018). *First Mile/Last Mile Strategies*. Washington, DC.

Traffic Congestion and Pollution

Because of its failure to materially increase its commuting, transit has played virtually no role in reducing air pollution or traffic congestion. Improved automotive technology has significantly reduced vehicle emissions, diminishing transit’s relative environmental benefits. By the early 2010s, the average new car had reduced its pollution by 99% compared to 1970, due to vehicle technology improvements.¹²

Mobility for Low-Income Residents

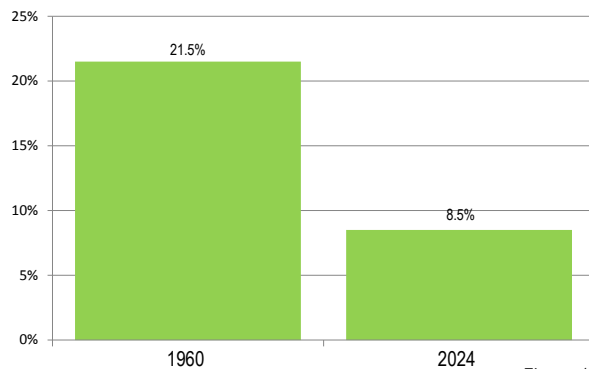
The share of U.S. households without a car (Figure 10) has declined from 21.5% in 1960 to 8.5% in 2024. The city of New York alone has 16.9% of no-car households in the US, which is 15 times the national share, and only 2.5% of the population.

A majority of low-income workers (63.5%) commute by car, nearly matching the overall national rate for auto commuting (69.2%). Car availability has increased materially, with the result that auto market shares for those in poverty rival the overall rate for all commuters (Figure 11).

Only in metro New York State and New Jersey do more low-income workers use transit than automobiles.

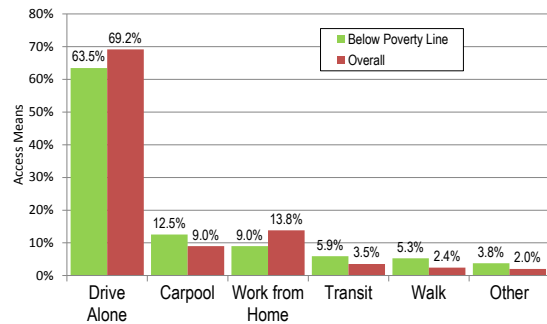
There is a strong association between the availability of a car and the avoidance of poverty.¹³

Figure 10: Households without Vehicles (United States: 1960-2024)



Derived from Census Bureau data.

Figure 11: Overall & Poverty Access to Jobs (United States: 2023)



Derived from American Community Survey 2023.

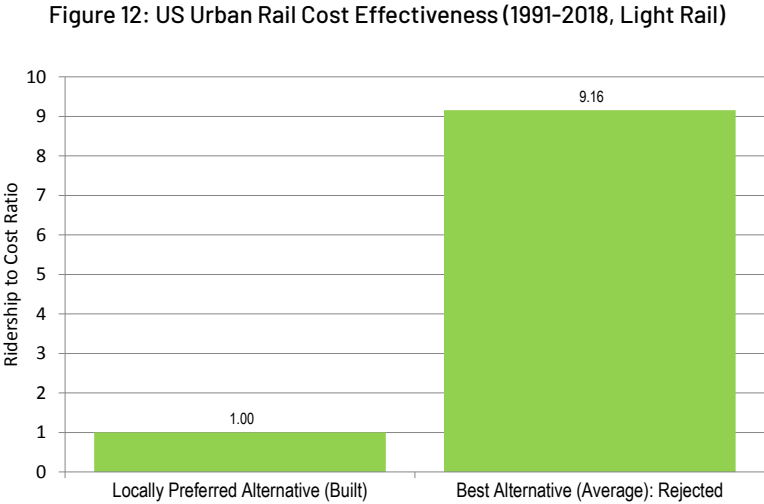
12 History of Reducing Air Pollution from Transportation in the United States, US Environmental Protection Agency, https://19january2021snapshot.epa.gov/transportation-air-pollution-and-climate-change/accomplishments-and-success-air-pollution-transportation_.html#:~:text=Compared%20to%201970%20vehicle%20models,percent%20cleaner%20than%201970%20models

13 David A. King Michael I. Smart and Michael Manville, “The Poverty of the Carless: Toward Universal Auto Access,” <https://journals.sagepub.com/doi/10.1177/0739456X18823252>.

Evaluating New Rail Transit

The major project choices of state and local governments have not maximized potential ridership. This has made transit far less effective than it would have otherwise been, as the research cited below indicates.

Yadi Wong and David Levinson at the University of Sydney (Australia) found that among 43 U.S. light rail projects which opened between 1991 and 2018, the rejected lower-cost alternatives were on average 9.2 times more cost-effective in projected new riders than the chosen rail options (Figure 12).¹⁴



Derived from Wong & Levinson, 2023.

The net effect is that the highest potential projects, which might have materially increased transit ridership, have been rejected. The authors conclude that this created “potential opportunity costs of rejecting more economical courses of action which could have likely managed prospective demand at much lower costs, and thus would have enabled more projects to be built and more people to have been served.”

Moreover, Federal Transit Administration research in 1990 documented huge under-projection of rail project costs, and overly optimistic ridership projections.¹⁵ Research at Oxford University (UK) has long documented cost overruns and overly optimistic ridership projections in rail transit projects.¹⁶ Too often, elected officials have made large project choices based on overly optimistic information.

14 Yadi Wong and David Levinson “The overlooked transport project planning process — What happens before selecting the Locally Preferred Alternative?” <https://www.sciencedirect.com/science/article/pii/S2590198223000568>

15 Don H. Pickrell, Urban Rail Transit Projects: Forecast Versus Actual Ridership and Cost, <https://ti.org/pdfs/Pickrell1990.pdf>

16 Bent Flyvbjerg , Mette Holm, Soren Buhl, Underestimating Costs in Public Works Projects: Error or Lie? Journal of the American Planning Association, Vol. 68, No. 3, pp. 279-295, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2278415

The Marron Institute of New York University has identified that U.S. rail projects incur a 50% capital cost premium per mile compared to international standards, with New York City's subway tunneling projects exceeding international costs by 250%.

Among 23 major metropolitan areas adding the most important rail projects over more than half a century, the latest data shows transit market share losses in all but two cases. Riverside-San Bernardino gained from a 0.8% transit market share to 0.9%, while Nashville remained constant at 0.8%. The largest transit market share loss was in Atlanta (78%), which built the most extensive subway/elevated system (in route miles) opened in the nation since 1978. Dallas-Fort Worth suffered the second largest transit market share decline (minus 73.9%), despite building the most extensive light rail system opened in the United States since 1975. On average, the transit market share loss for the 23 markets averaged 42.7% (Appendix Table 2).

Urban rail systems are often suggested by advocates and the national media, much of it located in the transit Mecca of New York City (Box 1) as means to reduce air pollution and traffic congestion by attracting drivers from their cars. However, achieving these objectives requires increasing transit's market share. Table 2 indicates, there has been no material transit market share increase in most cases.

Conclusion

The analysis above indicates that:

- Transit spending is at record levels, having increased well above the inflation rate.
- Transit's share of commuting is well below any reported level before 2020.
- Transit's 30-minute job access is far less than that of autos.
- Low-income workers rely principally on cars, which are associated with lower levels of poverty.
- Local transit systems have typically built major capital projects (especially rail) that were far more costly than other alternatives for which greater ridership was projected.

Despite this reality, transit industry lobbyists are seeking huge federal funding increases for the next federal reauthorization (fiscal years 2027-2031). Federal funding for transit would rise from \$108 billion in 2022-2026 to \$138 billion in 2027-2031.¹⁷

Given the existential threat that some attribute to the United States national debt, it is imperative to reduce or eliminate federal support to all programs except for those considered both successful and necessary. Transit is not among such programs.

17 American Public Transportation Association, APTA Letter to the Department of Transportation on APTA's Surface Transportation Authorization Recommendation, August 20, 2025, -<https://www.apta.com/advocacy-legislation-policy/testimony-letters/letters/apta-letter-to-the-department-of-transportation-on-aptas-surface-transportation-authorization-recommendations/>

Recommendations

Ultimately, the federal transit program has become an unsustainable financial burden that has not met its objectives.

Federal transit funding should be discontinued. This would reduce overall transit funding by about one-third. All public subsidies would then become the responsibility of state and local governments. State legislatures and local governments are far better positioned to determine the level of funding for transit services in their jurisdictions. State and local governments face far stronger constitutional or legislative financing limits, such as balanced budget requirements.

Moreover, state and local governments could employ various strategies to retain or even expand services for households without automobiles. State and local governments could leverage new technologies to retain and even increase service for customers who rely on lightly patronized services that would otherwise face reduction or elimination.

For example, the town of Innisfil, Ontario (50 miles north of Toronto) has used Uber to provide its transit services since 2017, replacing conventional buses. A report by the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) notes that the system is open to the public and provides "end-to-end" service-meaning door-to-door trips. This virtually eliminates the first-mile/last-mile problem described above. Geographic access within Innisfil was estimated to be four times greater than what could be achieved with an alternative bus-based system. NREL further reports that the costs are comparable to those of U.S. bus systems operating in urban areas with fewer than 1,000,000 residents.¹⁸

Another example has been proposed by Princeton University professor Alain Kornhauser and Swedish consultant Michael Sena,¹⁹ who have argued that automated vehicle services could be used to provide service in "transit deserts,"²⁰ areas where households without cars are concentrated. These transit deserts are similar in concept to "food deserts," where supermarket chains are deterred from maintaining or opening stores in high-crime neighborhoods. Already, the technological advent of ride-hailing services (like Uber and Lyft) has erased the "taxi deserts" that used to be typical in suburban areas across much of the US urban geography.

There may be other alternatives as well. One could be following the example of the cost reductions in federal programs pursued by the Administration's Department of Government Efficiency.

Finally, so long as federal funding of transit continues, major project planning should be required to include comparison of before and after transit and auto job access at the 30-minute and 60-minute commute times for the market (metropolitan area).

18 Dustin Weigl, Josh Sperling, Alejandro Henao, Andrew Duvall, and Stanley Young (2022) "Sustainability, Scalability and Resiliency of the Town of Innisfil Mobility-on-Demand Experiment: Preliminary Results, Analyses, and Lessons Learned, U.S. Department of Energy's National Renewable Energy Laboratory, <https://docs.nrel.gov/docs/fy22osti/80754.pdf>"

19 <https://shop.elsevier.com/books/the-real-case-for-driverless-mobility/kornhauser/978-0-443-23685-3>

20 A term used in a review of the Kornhauser-Sena book noted above. See Bern Grush, "The Real Case for Driverless Mobility," https://www.itsinternational.com/its4/its6/its7/feature/real-case-driverless-mobility?utm_source=chatgpt.com.

Appendix Tables

Table 1: 30-Minute Employment Access to Labor Market (Metro) Jobs

Market (Metro)	Auto	Transit	Auto Advantage (AA)	AA Rank	Market (Metro)	Auto	Transit	Auto Advantage (AA)	AA Rank
Atlanta	23.20%	0.23%	100.6	16	Milwaukee	86.56%	2.66%	32.6	43
Austin	59.96%	0.92%	65.4	29	Minneapolis	58.01%	0.81%	71.7	27
Baltimore	52.72%	1.21%	43.7	40	Nashville	37.15%	0.64%	58.5	31
Birmingham	57.76%	0.40%	144.1	4	New York	14.86%	1.90%	7.8	50
Boston	28.38%	1.53%	18.6	48	Oklahoma City	72.45%	0.65%	111.8	11
Buffalo	79.07%	1.68%	47.1	37	Orlando	55.22%	0.39%	139.9	6
Charlotte	38.10%	0.45%	84.6	19	Philadelphia	26.07%	1.15%	22.7	46
Chicago	22.70%	1.03%	22	47	Phoenix	48.36%	0.46%	105.9	12
Cincinnati	55.99%	0.58%	96.4	18	Pittsburgh	31.68%	0.88%	36	41
Cleveland	62.49%	0.77%	81.5	21	Portland	55.34%	1.55%	35.6	42
Columbus	71.75%	0.94%	76	26	Providence	51.21%	1.15%	44.5	39
Dallas	36.63%	0.24%	150.1	3	Raleigh	89.62%	0.56%	160.6	2
Denver	67.02%	1.26%	53.1	33	Richmond	72.49%	1.07%	68	28
Detroit	53.27%	0.25%	210.2	1	Riverside	26.52%	0.19%	142.4	5
Fresno	70.24%	1.45%	48.6	36	Sacramento	60.13%	0.79%	76.1	25
Grand Rapids	69.40%	1.40%	49.7	35	Salt Lake City	127.42%	2.10%	60.8	30
Houston	29.80%	0.39%	76.2	24	San Antonio	59.98%	0.60%	99.2	17
Indianapolis	62.25%	0.61%	101.9	15	San Diego	51.37%	0.64%	80.5	22
Jacksonville	53.79%	0.40%	133.7	9	San Francisco	36.70%	2.98%	12.3	49
Kansas City	67.70%	0.50%	135.2	8	San Jose	110.73%	1.93%	57.3	32
Las Vegas	89.42%	0.77%	116.1	10	Seattle	38.57%	1.56%	24.7	44
Los Angeles	25.86%	0.58%	44.8	38	St. Louis	52.16%	0.38%	136.8	7
Louisville	73.24%	0.93%	78.6	23	Tampa	39.25%	0.48%	82.3	20
Memphis	81.40%	0.79%	103.4	14	Virginia Beach	49.48%	0.47%	104.4	13
Miami	25.81%	0.52%	50.1	34	Washington	27.50%	1.15%	23.9	45

Derived from University of Minnesota data. Excludes those working from home.

Table 2: Transit Market Share Trends: Major Metros with New Rail Systems

Transit Market Share					
Market	Last Census Before Opening	Last Census Market Share	2024	Change to 2024	Rank
Atlanta	1970	7.3%	1.6%	-78.1%	24
Austin	2000	2.5%	1.4%	-44.0%	15
Baltimore	1980	7.7%	3.5%	-54.5%	20
Buffalo	1980	6.6%	2.4%	-63.6%	22
Charlotte	2000	1.2%	1.1%	-8.3%	3
Denver	1990	4.3%	2.1%	-51.2%	19
Dallas-Fort Worth	1990	2.3%	0.6%	-73.9%	23
Houston	2000	3.2%	1.7%	-46.9%	16
Los Angeles	1990	5.6%	3.5%	-37.5%	10
Miami	1980	4.4%	2.6%	-40.9%	11
Minneapolis-St. Paul	2000	4.2%	2.1%	-50.0%	18
Nashville	2000	0.8%	0.8%	0.0%	2
Phoenix	2000	1.9%	1.2%	-36.8%	9
Portland	1980	7.9%	3.4%	-57.0%	21
Riverside-San Bernardino	1990	0.8%	0.9%	12.5%	1
Sacramento	1980	3.4%	1.8%	-47.1%	17
San Diego	1980	3.3%	1.9%	-42.4%	14
Seattle	2000	7.0%	6.3%	-10.0%	5
San Francisco	1970	15.9%	10.9%	-31.4%	7
San Jose	1980	3.1%	2.8%	-9.7%	4
Salt Lake City	1990	3.3%	2.5%	-24.2%	6
St. Louis	1990	2.9%	1.7%	-41.4%	12
Virginia Beach-Norfolk	2010	1.8%	1.2%	-33.3%	8
Washington	1970	15.5%	9.0%	-41.9%	13
Average		4.9%	2.8%	-42.7%	

Derived from Census Bureau data.

