



NJ Transit: An Economic Analysis of Reliability, Funding, and Reform



A REPORT FOR THE GARDEN STATE INITIATIVE
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Executive Summary

Reliable public transportation is essential to New Jersey’s economy. More than 700,000 passenger trips occur on NJ Transit each weekday, connecting workers to jobs, reducing highway congestion, and supporting one of the nation’s largest regional labor markets. Yet in recent years, recurring delays, equipment failures, and service disruptions have raised growing concerns about whether NJ Transit can continue to meet the transportation needs of New Jersey residents and businesses.

Public debate has largely focused on Amtrak-owned infrastructure and whether additional public funding will solve the problem. This report reaches a different conclusion.

Using original empirical analysis of NJ Transit performance data from 2020–2024, the evidence suggests that NJ Transit’s reliability challenges cannot be explained by external disruptions or funding levels alone. Instead, they reflect a combination of external infrastructure constraints and internal operational and asset management challenges.

This report reaches four major findings:

- » **Amtrak is part of the problem, but not the whole problem.** Amtrak-related disruptions are associated with lower on-time performance, but they do not explain NJ Transit’s persistent mechanical reliability problems.
- » **More funding has not produced more reliable service.** Between 2020 and 2024, NJ Transit’s operating budget increased by roughly 20 percent, yet mechanical reliability continued to decline. The recently approved FY2027 budget increases spending to a record \$3.5 billion—46 percent above its 2020 level—making it increasingly important that additional resources be tied to measurable improvements in reliability.
- » **Reliability depends on how resources are managed, not simply how much is spent.** Evidence from Boston, Virginia, and Metro-North demonstrates that higher-performing transit systems direct maintenance resources towards the greatest sources of unreliability, prioritize investments using objective performance measures, and replace or rehabilitate assets before failures become widespread.
- » **New Jersey should shift from reactive to performance-based investment.** Improving transit reliability requires distinguishing between external infrastructure constraints that NJ Transit cannot directly control and internal operational challenges for which it is accountable. New Jersey should develop short- and long-term infrastructure improvement plans that distinguish between investments NJ Transit can undertake independently and those requiring coordination with Amtrak.

The Reliability Problem

Public frustration with NJ Transit has intensified in recent years. Recurring delays, equipment failures, and service disruptions culminated in the widely publicized¹ “Summer of Hell” in 2024 and prompted recent calls from Governor Sherrill and state legislators for meaningful reforms. While much of the public debate has focused on Amtrak’s ownership of the Northeast Corridor, an important question remains:

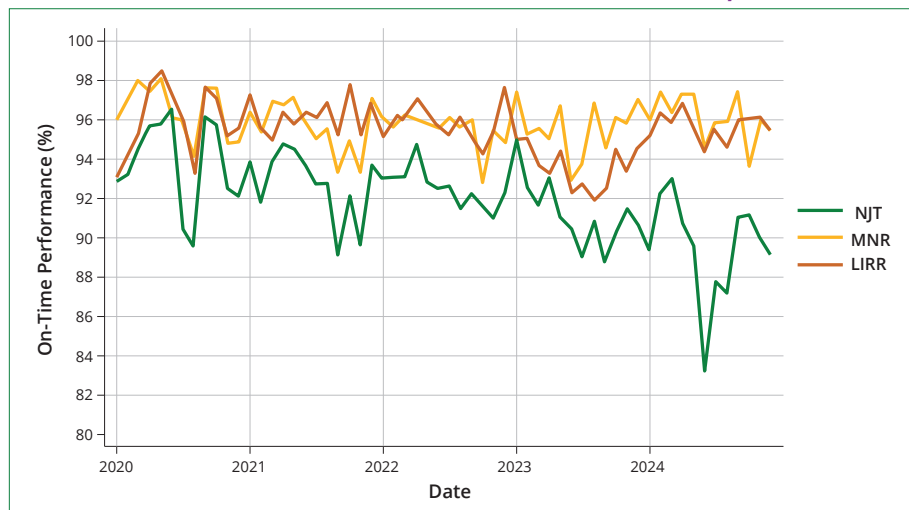
Are NJ Transit’s problems primarily caused by external disruptions, or by problems within NJ Transit itself?

To answer this question, this report examines two complementary measures of system performance.

- » **On-time performance (OTP)** measures the percentage of scheduled trains arriving at their final destination within five minutes and 59 seconds of schedule.
- » **Mean Distance Between Failures (MDBF)** measures the average number of miles a train travels before experiencing a mechanical failure.

While OTP captures the reliability experienced by riders, MDBF measures the underlying mechanical reliability of the rail fleet. Examining both measures provides a more complete picture of NJ Transit’s performance.

FIGURE 1. ON-TIME PERFORMANCE BY AGENCY, 2020-2024



1 NJ Spotlight News (2024). Can NJ Transit, Amtrak avert another ‘summer of hell?’. YouTube video: Available at: <https://www.youtube.com/watch?v=x10h0j7eXSU>.

As shown in Figure 1, NJ Transit’s on-time performance generally remained between 90 and 96 percent before deteriorating during 2024. Although NJ Transit typically trails Metro-North and the Long Island Railroad, its on-time performance remains broadly comparable to these peer systems, despite LIRR operating at least some service over Amtrak-owned infrastructure.

If on-time performance were the only measure of reliability, NJ Transit would appear to perform only modestly worse than its regional peers. Mechanical reliability, however, tells a very different story.

FIGURE 2. MEAN DISTANCE BETWEEN FAILURES BY AGENCY, 2020-2024

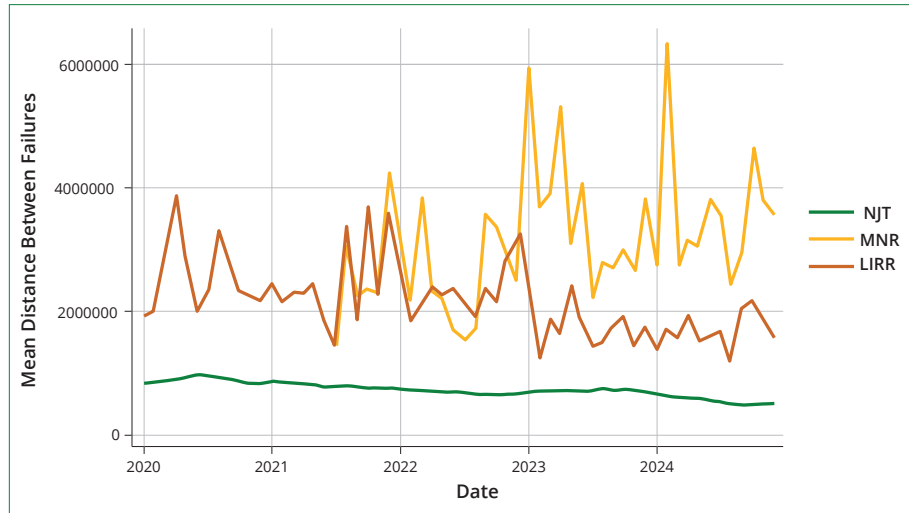


Figure 2 shows that NJ Transit’s mean distance between failures is consistently and substantially lower than both Metro-North and the Long Island Rail Road. By the end of 2024, Metro-North railcars traveled more than seven times farther between mechanical failures than NJ Transit railcars, while Long Island Rail Road railcars traveled more than three times farther.²

- The evidence suggests that NJ Transit’s greatest challenge is not simply getting trains to run on time, it’s keeping them from breaking down.

Why is NJ Transit so Unreliable?

When NJ Transit experiences major delays or service disruptions, the explanation most often offered is Amtrak. The reasoning is straightforward: much of NJ Transit’s busiest service operates over the Northeast Corridor, a rail line owned and dispatched by Amtrak. Because NJ Transit does not control dispatching, rail maintenance schedules, or many infrastructure decisions along this corridor, disruptions on Amtrak’s network frequently spill over into NJ Transit service. Following major service disruptions in 2024, Governor Murphy summarized this view by stating, “*This was not New Jersey Transit’s fault. This was Amtrak.*”³

There is little doubt that Amtrak contributes to service disruptions. The more important policy question is whether it explains all dimensions of NJ Transit reliability. Because Amtrak owns and

² Although differences in fleet composition and agency reporting practices limit perfect comparisons, the size and persistence of these reported gaps raise serious concerns about NJ Transit’s fleet reliability.

³ NJ Spotlight News (2024). <https://www.njspotlightnews.org/2024/06/nj-transit-train-service-flaws-not-just-njt-fault-decrepit-infrastructure-amtrak-rail-line-control-federal-issues/>

dispatches much of the Northeast Corridor infrastructure used by NJ Transit, Amtrak-related incidents would be expected to affect OTP. They would not necessarily be expected to affect MDBF, which measures the mechanical reliability of NJ Transit’s own rail fleet. Examining these measures separately helps distinguish infrastructure-related disruptions from fleet reliability problems and clarifies where responsibility for improvement primarily lies.

To explore these relationships, this report draws on empirical analysis developed in [What Reliability Metrics Miss: Evidence from NJ Transit](#) (Zanzalari and Alba, 2026). The analysis estimates separate models of monthly on-time performance (OTP) and mean distance between failures (MDBF) using NJ Transit data from 2020 through 2024. The results suggest that different factors may help explain different dimensions of NJ Transit’s reliability. Table 1 summarizes the principal findings.

TABLE 1. FACTORS LINKED TO NJ TRANSIT RELIABILITY

Factor	On-Time Performance (OTP)	Mechanical Reliability (MDBF)
Amtrak-related incidents	Negative	—
Equipment availability	Negative	—
Ridership	Negative	Negative
Operating budget	Negative	Negative
Weather / Unpreventable events	Negative	—

Notes: *Negative* indicates the factor is associated with lower reliability, while *Positive* indicates the factor is associated with higher reliability, all with statistical significance. (—) indicates no statistically significant relationship. Results summarize the empirical findings from Zanzalari and Alba (2026).

The results suggest that NJ Transit faces two distinct reliability problems rather than one:

- » **Amtrak is part of the problem, but not the whole problem.** Amtrak-related incidents are associated with lower on-time performance but have no statistically significant relationship with NJ Transit’s mechanical reliability.
- » **NJ Transit faces a separate fleet reliability challenge.** Mechanical reliability is associated with ridership and funding measures, suggesting that the condition of NJ Transit’s fleet is influenced by a different set of factors than schedule delays.
- Recognizing that NJ Transit faces both external infrastructure constraints and internal operational challenges is essential because each requires a different policy response. **It also helps explain why additional funding alone has not translated into more reliable service.**

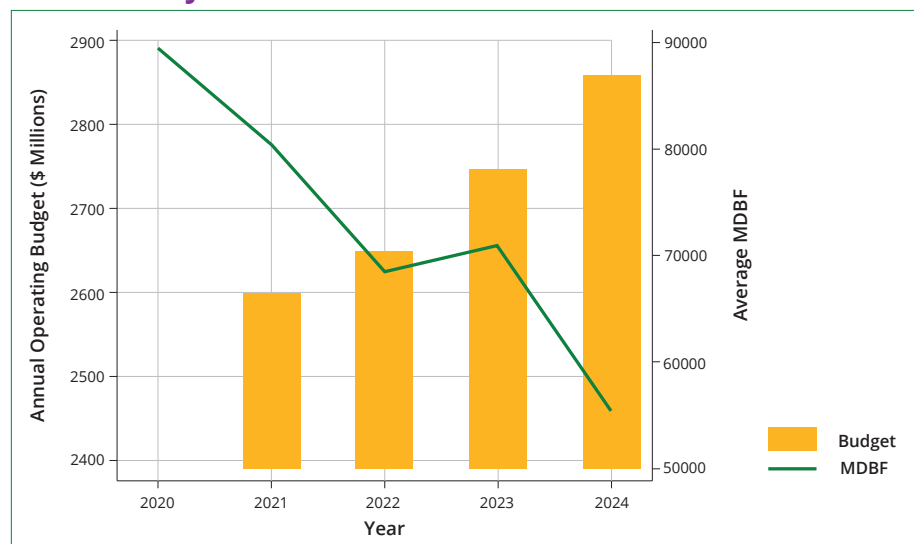
Why Hasn't More Public Funding Solved the Problem?

Between 2020 and 2024, NJ Transit's operating budget increased from approximately \$2.39 billion to \$2.86 billion annually—an increase of roughly 20 percent. State and federal operating support also increased substantially during this period as policymakers responded to recurring service disruptions and growing public frustration.

Spending has continued to rise since the end of the study period. NJ Transit's recently approved FY2027 operating budget⁴ totals \$3.5 billion—approximately 22 percent above its 2024 budget and 46 percent above its 2020 budget. The new budget includes nearly \$1.07 billion in state support, even as fare collections have fallen short of projections and labor and benefit costs have exceeded budgeted amounts. Most of the increase supports operating costs of labor and fringe benefits, which account for about 60% of the FY2027 budget, reflecting higher wages and normalized staffing after pandemic-era vacancies.

Despite these additional resources, reliability continued to deteriorate. Average mean distance between failures fell from roughly 89,000 miles in 2020 to 55,000 miles in 2024—a decline of nearly 40 percent. Mechanical failures became more frequent, and commuters experienced persistent delays and cancellations. If insufficient funding were the primary cause of NJ Transit's reliability problems, we would expect performance to improve as resources increased. Instead, mechanical reliability declined even as the operating budget grew.

FIGURE 3. NJ TRANSIT OPERATING BUDGET AND MECHANICAL RELIABILITY, 2020–2024



4 Nikita Biryukov, "NJ Transit Approves \$3.5 Billion Budget," New Jersey Monitor, July 16, 2026, <https://newjerseymonitor.com/2026/07/16/nj-transit-approves-3-5-billion-budget>

The opposing trends suggest that higher funding alone has not been sufficient to reverse the decline in mechanical reliability. Rather, it implies that increases in funding have often been reactive—responding to deteriorating service after problems emerge rather than preventing those problems ahead of time.

- Like its regional peers, NJ Transit depends on significant public operating support. The difference is not whether subsidies are required, but whether riders are getting reliable service in return. The evidence suggests that NJ Transit’s reliability challenges are less about the amount of funding available and more about how those resources are allocated and managed.
- Additional funding is unlikely to produce lasting improvements unless it is directed toward the operational and asset management factors that actually drive reliability.

What Can New Jersey Learn from Successful Transit Reforms?

Several transit agencies have faced reliability challenges similar to those confronting NJ Transit. While no transit system provides a perfect blueprint, many have implemented practical reforms that address the same operational and management challenges identified in this report. Their reforms offer valuable lessons for improving transit reliability in New Jersey.

Case Study 1: MBTA (Boston) → Fix the Worst Problems

By 2022, the MBTA faced widespread slow zones, deteriorating track conditions, and repeated safety failures, prompting intervention by the Federal Transit Administration. Rather than spreading maintenance dollars across the system, the MBTA concentrated crews and capital spending on eliminating the worst-performing track segments while publicly reporting progress each week.⁵ By the end of 2024, it had eliminated more than 220 speed restrictions, replaced more than 250,000 feet of rail and reduced travel times across the system.

Lesson for New Jersey: Prioritize maintenance where failures have the greatest impact on reliability rather than where projects are easiest or most politically visible.

Case Study 2: DRPT (Virginia) → Performance-Based Transportation Funding

Faced with transportation needs that exceeded available funding, Virginia shifted away from relying primarily on historical allocations and political priorities. Instead, the Commonwealth adopted a performance-based funding framework⁶ that evaluates projects using objective measures such as congestion reduction, safety, accessibility, economic development, and asset condition. The result has been a more transparent process that directs limited transportation dollars toward projects expected to generate the greatest public benefit.

Lesson for New Jersey: Prioritize major transportation investments using objective performance measures rather than simply increasing appropriations.

5 Federal Transit Administration, *Safety Management Inspection—Final Report: Massachusetts Bay Transportation Authority and Massachusetts Department of Public Utilities*, August 31, 2022, https://www.transit.dot.gov/sites/fta.dot.gov/files/2022-08/FTA-Safety-Management-Inspection-Report-for-MBTA-and-DPU_0.pdf.

6 Virginia Department of Rail and Public Transportation, *Capital Assistance—Program Prioritization: FY2026 Technical Guidance*, https://drpt.virginia.gov/wp-content/uploads/2024/03/FY26-Capital-Assistance-Program-Prioritization-Technical-Guidance_FINAL-093024.pdf

Case Study 3: MNR (New York) → Invest Before Assets Fail

Like NJ Transit, Metro-North operates an aging commuter rail network with heavy ridership and challenging operating conditions. Rather than waiting for equipment failures to dictate investment priorities, Metro-North uses asset condition assessments and lifecycle planning to guide maintenance and replacement decisions. The agency has consistently achieved substantially higher mechanical reliability than NJ Transit, demonstrating how preventive asset management can support stronger fleet reliability.⁷

Lesson for New Jersey: Use asset condition data to prioritize maintenance and replacement before reliability begins to deteriorate.

Although these case studies emphasize different reforms, they share a common theme. Successful transit agencies do not simply spend more money—they spend it more strategically. They allocate scarce transportation dollars using objective performance measures, prioritize investments that deliver the greatest improvements in reliability, and address maintenance needs before small problems become systemwide failures.

⁷ Metropolitan Transportation Authority, Metro-North Railroad, *2024 Annual Operating Report*, <https://www.mta.info/document/164871>.

Conclusion

Reliable public transportation is essential to New Jersey's economy, but reliability cannot be achieved through funding alone. The evidence presented in this report suggests that NJ Transit faces two reliability challenges:

- » disruptions on Amtrak-owned infrastructure, and
- » internal operational challenges related to fleet reliability and asset management.

The evidence suggests that these challenges require different policy responses.

External infrastructure disruptions require continued coordination with Amtrak, while improving fleet reliability requires stronger operational management and accountability within NJ Transit. Lasting improvements will depend not simply on increasing transportation spending, but on directing resources toward the specific factors driving unreliability.

The success of transportation policy should be judged not by the size of public investment, but by whether those investments produce measurable improvements in transit reliability.