

PRT cost and activity compared to other transit agencies

Introduction: Using National Transit Database (NTD) data and statistics this *Policy Brief* reviews and comparatively analyzes key 2019 and 2022 (latest available) annual data to gauge performance and expense measures for bus service at Pittsburgh Regional Transit (PRT)—formerly Port Authority Transit (PAT)—and seven other transit agencies across the country.

Changes in the bus systems' operating expense, operating expense per unlinked trip, operating expense per revenue hour and change in revenue hours will describe the basic differences among the performance levels at the eight agencies. However, given the large cost-of-living difference between Pittsburgh and the seven comparison cities, PRT's expense per revenue hour will be adjusted by the cost-of-living gap between Pittsburgh and each of the seven other cities to get a more accurate comparison of 2022 expense per revenue hour levels.

Note that as of late 2023 NTD still refers to PRT as PAT which officially became known as PRT on July 1, 2022. The comparison transit agencies are in Dallas, Miami, Minneapolis, Chicago, Portland, Seattle and New York City (MTA).

Overview and summary

Comparing bus operating costs across agencies presents several difficulties. The normal tendency would be to look at the expense per passenger trip. And while that is somewhat useful, it can be deficient in that larger cities with high-density populations and potential bus riders will typically be able to keep buses running at higher usage levels than lower-population-density cities. Looking at ridership changes across transit agencies from one year to another can be instructive but only as it relates to changes in factors affecting demand for bus transportation.

Thus, the better measure of cost effectiveness is to compare the expense per vehicle revenue hour. That largely avoids the problem of differing densities among cities with mass-transit bus service.

Cost per vehicle revenue hour is simply the total of all costs incurred by an agency to operate buses divided by the hours they are in paid passenger service and does not necessarily reflect passenger trips. The cost will include driver compensation, maintenance and repair costs and the administrative staff employed to manage the system for route planning, scheduling, personnel services, etc.

The principal findings are: PRT's operating expense per vehicle revenue hour of \$199 in 2019 exceeded all the comparison agencies except New York City and was tied with Miami. In 2022, PRT's operating cost per revenue hour of \$234 exceeds five of the seven comparison agencies trailing only New York City (\$245) and being tied with Seattle. Moreover, all but one of the cities (Minneapolis) has a higher cost-of-living than Pittsburgh—two, Seattle and New York are very much higher. After adjusting the comparative cost-of-living differences, PRT had the highest cost per revenue hour of all the cities, with the margin ranging from 14.8 percent higher than Minneapolis to 66 percent higher than NYC.

The following discusses three performance variables other than cost per revenue hour through a comparison of value levels and the 2019 to 2022 changes in each.

Bus operating expense

The table below shows the operating expenses for each agency's bus operations for 2019 and 2022 with the percentage change. As expected, the larger bus systems have greater expenses with New York far and away the highest followed by Chicago and Seattle. Four agencies (PRT, Dallas, Minneapolis and Portland) are clustered at, or near, \$300 million. Miami is somewhat of an outlier with significantly higher spending than these four, but trails well behind the three top spenders.

Interestingly, there was a moderately wide range of percentage increases from 2019 to 2022. Miami had an increase in expenses of 12.6 percent to \$412 million while PRT expenses rose 5.8 percent with NYC and Seattle up 7.4 percent and 8.1 percent, respectively. Four posted declines in expenditures, ranging from 0.3 percent in Portland and 6.1 percent in Chicago.

(millions of \$)	PRT	Dallas	Miami	Minneapolis	Chicago	Portland	Seattle	NYC
2019	324.3	288.3	366	331	824	305	621	2,700
2022	343.2	287.4	412	316	774	304	671	2,900
% Change	5.8	-0.3	12.6	-4.5	-6.1	-0.3	8.1	7.4

Unlinked trips

The following table presents the unlinked trips for each agency and the percent change from 2019 to 2022. NYC was, by a very large margin, the largest in terms of passenger trips at 692 million in 2019. Chicago was a distant second at 237 million followed by another big gap to third place Seattle at 104 million. PRT, Miami, Minneapolis and Portland cluster fairly close to 50 million unlinked trips.

Percentage declines from 2019 to 2022 saw six of the eight agencies decline by 40 to 50 percent led by Seattle at 49.2 with Chicago having the smallest drop of the six at 41 percent. Miami was the best in terms of passenger count, with a decline of only 25 percent followed by second-best New York at 33.7 percent. PRT trips fell 47.3 percent from 2019 to 2022. Miami's faster turnaround tracks somewhat with Florida's overall quicker economic recovery from the pandemic.

PRT's percentage drop in unlinked trips is well within the range of decline at the majority of comparison transit agencies.

(millions of unlinked trips)	PRT	Dallas	Miami	Minneapolis	Chicago	Portland	Seattle	NYC
2019	54.9	37.2	49.6	51.9	237.3	56.4	104.4	692.0
2022	29.0	21.5	37.2	26.4	140.1	30.5	53.0	459.0
% Change	-47.3	-42.2	-25	-49	-41	-45.9	-49.2	-33.7

Vehicle revenue hours

PRT had the lowest number of revenue hours of the eight agencies at 1.63 million in 2019 and 1.46 million in 2022, a decline of 10.4 percent, far less than the 47 percent dip in PRT's passenger count. Meanwhile, Dallas, Minneapolis and Chicago posted significantly bigger cutbacks while the pullback in hours in New York was only 3.3 percent and Miami had no reduction in hours.

It is important to note that none of the agencies reduced vehicle hours as much as its passenger count fell. The largest gap between the percentage drop in passengers and the cutback in vehicle hours occurred at PRT and Seattle at 37 percent. Portland was near the worst with a 38.4 percent gap between passenger reduction and vehicle hours.

(millions of vehicle revenue hours)	PRT	Dallas	Miami	Minneapolis	Chicago	Portland	Seattle	NYC
2019	1.63	2.25	1.84	2.0	5.8	2.0	3.3	12.2
2022	1.46	1.67	1.84	1.6	4.8	1.85	2.9	11.8
% Change	-10.4	-25.8	0	-20	-17.2	-7.5	-12.1	-3.3

Operating expense per vehicle hour

The most important measure with which to compare the eight transit agencies is the operating expense per vehicle revenue hour. This measure, while not perfect as a true indicator of a transit agency's effectiveness in the use of the revenue it receives from fares and government subsidies, is the best. The delivery of bus service can only be accomplished by having buses traveling along routes. Costs are incurred by that travel and the efficiency of that service is in direct proportion to its cost per hour.

The following table shows that in 2019, PRT's expense per revenue hour was \$199 which was matched by Miami and closely followed Seattle. NYC recorded the highest cost at \$220. Dallas at \$128 was the lowest followed by Chicago (\$142) and Portland (\$150).

By 2022, PRT's expense per revenue hour had climbed nearly 18 percent to \$234, which was matched by Seattle to share the second highest reading behind New York's \$245. Miami and Minneapolis registered expense per hour of \$224 and \$199 to stand fourth and fifth highest among the eight agencies. Chicago was lowest with a reading of \$160.

(\$ expense per revenue hour)	PRT	Dallas	Miami	Minneapolis	Chicago	Portland	Seattle	NYC
2019	199	128	199	165	141.8	150	190	220
2022	234	172	224	199	160	164	234	245
% Change	17.6	34.4	12.8	20.4	12.9	9.3	23.2	11.4

Cost per revenue hour adjusted for cost-of-living differences

As noted in the summary, there are substantial cost-of-living differences between Pittsburgh and the other cities whose transit agencies have been analyzed above. The calculations of cost-of-living differences were done using the [Nerdwallet](#) calculator. The calculation is for 2022 to match up with the cost data. The cost-of-living differences compared to Pittsburgh are as follows: Dallas, 1.0186; Miami, 1.183; Minneapolis, 0.975; Chicago, 1.195; Portland, 1.248; Seattle, 1.508; and New York, (Brooklyn where NYCTA is headquartered) 1.737.

The cost-of-living ratio is used to adjust PRT's actual cost per revenue hour to determine what that cost would be at PRT if the comparison city cost-of-living level existed in Pittsburgh. The table below shows the percentage PRT unadjusted cost over the comparison agency cost and the cost-of-living adjusted PRT cost over the comparison agency cost.

(2022 expense per revenue hour)	Dallas	Miami	Minneapolis	Chicago	Portland	Seattle	NYC
% non-adjusted PRT over agency	36.0	4.5	17.6	46.3	42.7	0	-4.5
% adjusted PRT over agency	38.6	23.6	14.8	74.8	78	50.8	66.0
Increase % due to adjustment	2.6	19.1	-2.8	28.5	35.3	50.8	70.5

Note that unadjusted for cost-of-living differences, PRT's expense per revenue hour is higher than all the other agencies except New York and tied with Seattle. PRT adjusted expense per revenue hour increases relative to all the unadjusted ratio for all agency levels except for Minneapolis, which has a slightly lower cost-of-living than Pittsburgh.

Other than Minneapolis, the PRT adjusted difference with other agencies rose from 2.6 percentage points in Dallas to 70.5 percentage points in New York. The wide gap in adjusted over non-adjusted cost differences is caused by the spread in the living costs among the cities. For example, the two largest differences on living costs between Pittsburgh and other cities were in Seattle and New York.

Conclusion

As measured by operating expense per revenue hour, PRT is costlier than all agencies except Seattle and New York. Adjusted for cost-of-living PRT is the most expensive agency of the eight which includes a wide range of agencies in terms of size, geographic location and expense per revenue hour.

Pittsburgh Regional Transit needs to examine its operations for its ridership per route, the frequency of service, personnel levels and administration and labor expenses to learn why its expense per revenue hour is higher than most other agencies and significantly higher when adjusted for the cost-of-living.

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