

Valuing Our Transit Infrastructure

While obtaining the price for a private good is straightforward – markets naturally provide prices for most goods and services, after all – that is not the case for public goods. What if someone asked you to attach a value to a public resource such as a park, clean water or a reliable transit system? What about a workforce training program or a national defense project?

These are questions that permeate public policy and public sector economics. Institutions, including the Port Authority of New York and New Jersey, juggle them on a daily basis, as do policy makers and engaged constituent groups. In particular, many of the services provided by the Port Authority come with a price tag but there may be additional value in the form of customer and societal benefits that go beyond the tolls or fees charged to users. As a result, the prices, fees and tolls charged for public services reflect only a portion of those services' value. And those same prices, fees and tolls may recover some — and sometimes all — of the cost of providing those services but society also benefits beyond the monetary equivalents.

The Port Authority refreshed its consideration of these issues following recent news coverage of PATH – one of the its central lines of business – that seemed to question the transit system's net value. While PATH recovers a little less than half of its annual operating and capital costs, any consideration of a transportation system's value that focused largely or solely on its bottom line would fall well short of providing a real understanding of value. Rail systems across the board lose money – around \$1 or more per trip for big cities, according to a study by the Brookings Institution, which combined federal data sources on metro rail systems' operating expenses, revenue and passenger activity to compare farebox recovery rates.

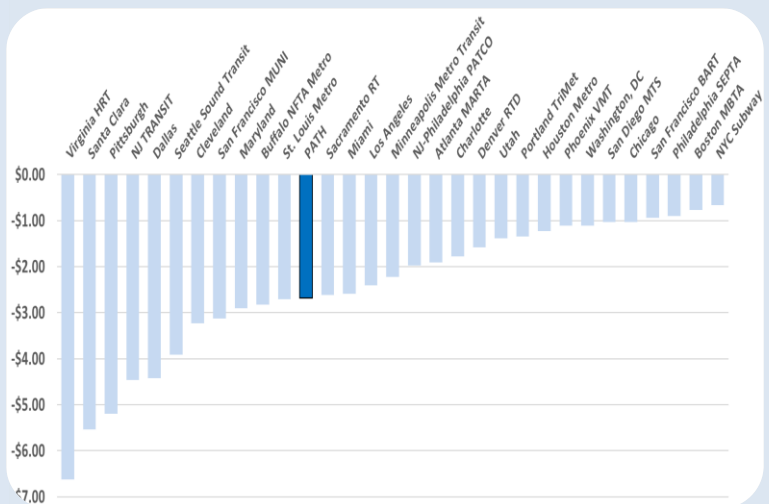
Bottom line: the region's rail systems – the New York City subway, New Jersey Transit and PATH – all recover only some of their cost in fares with the rest being subsidized by taxes, fees or other charges². It's no different with other transit systems elsewhere in the United States. Very few come close to covering their costs without major subsidies. In many cases transit operators would need to more than double their fares to recoup their costs. For PATH, this would mean a one-way fare of around \$6 compared to the current fare of \$2.75.

THE WATCHLIST

Economic Variables	Current	One Year Trend
UNITED STATES		
Real GDP [Annual Rate]	Q4 2018	2.2%
Unemployment Rate	Feb-19	3.8%
Consumer Price Index [Annual]	Feb-19	1.5%
Gasoline Price [Regular]	Feb-19	\$2.31
PORT AUTHORITY REGION		
Regional Employment [NY MSA]	Feb-19	9,921
Consumer Price Index [Annual]	Feb-19	1.9%
Port District Exports [\$Bill]	Oct-18	\$13.31
Port District Imports [\$Bill]	Oct-18	\$23.00
Case-Shiller Home Price Index	Jan-19	3.3%
Commercial Real Estate Asking Rent		
Midtown	Q42018	\$81.69
Downtown	Q42018	\$67.88

The regional economy benefits from transit services to a greater extent than the annual revenues collected through fares. Such benefits are made up of the added mobility within the city and surrounding counties, greater labor market access, potentially enhanced reliability of service compared to other modes, and more favorable environmental impacts. In a different context, take the example of a public housing program. Public housing provides recipients with a number of benefits. Beneficiaries are generally safer, enjoy stronger mental and physical health, and are more satisfied with general housing and neighborhood conditions; they may also do better at school and in the workplace than they would have without that housing support. None of these benefits appear on the program agency's bottom line, but they remain very real. In fact, public agencies' and researchers' analytical toolboxes include methods

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Data: Average loss per passenger ride, metro rail systems. From US DOT data (2015) via Brookings Institution.

¹ <https://www.nytimes.com/2019/01/02/nyregion/path-train-nj-ny.html>

² <https://www.nispotlight.com/stories/15/07/05/the-list-the-10-u-s-transit-agencies-that-rely-most-on-fare-revenues/>

MONTHLY ECONOMIC INDICATORS

THE PORT AUTHORITY OF NY & NJ

Planning and Regional Development Department

March 2019

AVIATION	Jan '19	YTD	Jan '19/'18	YTD '19/'18	PORT	Jan '19	YTD	Jan '19/'18	YTD '19/'18
Revenue Passengers (000's)	10,106.5	10,106.5	5.6%	5.6%	Port Trade				
John F. Kennedy International Airport (JFK)	4,629.9	4,629.9	8.8%	8.8%	Container Imports (TEUs)	327,345	327,345	5.9%	5.9%
LaGuardia Airport (LGA)	2,079.6	2,079.6	3.3%	3.3%	Container Exports (TEUs)	111,833	111,833	-0.9%	-0.9%
Newark Liberty International Airport (EWR)	3,352.3	3,352.3	2.9%	2.9%	Containers lifted on/off Express Rail	54,705	54,705	8.8%	8.8%
Stewart International Airport (SWF)	44.7	44.7	4.0%	4.0%					
Revenue Freight (Short Tons)	175,060	175,060	0.8%	0.8%	TUNNELS, BRIDGES & TERMINALS	Jan '19	YTD	Jan '19/'18	YTD '19/'18
Domestic	68,034	68,034	4.6%	4.6%	Eastbound Vehicle Volumes (000's)	9,242	9,242	2.5%	2.5%
International	107,026	107,026	-1.5%	-1.5%	George Washington Bridge	3,921	3,921	1.3%	1.3%
Flights	116,666	116,666	3.2%	3.2%	Lincoln Tunnel	1,438	1,438	-2.0%	-2.0%
Domestic Air Carrier	75,837	75,837	5.5%	5.5%	Holland Tunnel	1,210	1,210	6.8%	6.8%
International Air Carrier	24,814	24,814	4.9%	4.9%	Bayonne Bridge	202	202	-8.6%	-8.6%
General Aviation	16,015	16,015	-8.6%	-8.6%	Goethals Bridge	1,327	1,327	13.9%	13.9%
Paid Parked Cars	502,999	502,999	-4.8%	-4.8%	Outerbridge Crossing	1,144	1,144	-1.1%	-1.1%
Revenue AirTrain Passengers	1,362,932	1,362,932	-4.1%	-4.1%	Eastbound Volumes by Vehicle Type (000's)				
					Autos	8,399	8,399	2.5%	2.5%
					Trucks	608	608	3.8%	3.8%
					Buses	235	235	1.3%	1.3%
FERRY OPERATIONS	Jan '19	YTD	Jan '19/'18	YTD '19/'18					
Passengers (000's)					U.S. TRANSPORT. SERVICES INDEX	Jan '19	Dec '18	Change	
New Jersey Ferries	771.8	771.8	17.7%	17.7%	(Prelim., Seasonally Adj., 2000=100)				
					TSI - Combined Index	134.9	134.4	0.4%	
PATH	Jan '18	YTD	Jan '19/'18	YTD '19/'18	TSI - Freight	136.8	136.3	0.4%	
Passengers (000's)	6,480.0	6,480.0	0.1%	0.1%	TSI - Passenger	130.8	130.5	0.2%	
Average Weekday	272.3	272.3	2.1%	2.1%					
Average Saturday	84.4	84.4	-16.2%	-16.2%					
Average Sunday	62.4	62.4	-11.6%	-11.6%					

TRANSPORTATION FOCUS

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measuring those benefits. That's been done, in the world of housing, through "Moving to Opportunity"³ research and other efforts. Similar approaches can be applied toward measuring the benefits of transportation and, with it, comparing those benefits to program and project costs.

For the Port Authority's PATH system, some [back-of-the-envelope math](#) suggests a three-day train shutdown would inconvenience travelers to the rough tune of an additional 80,000 travel hours. Federal guidance suggests that such inconvenience could be valued at around \$6 million dollars, or \$2 million a day, which roughly matches the daily cost (using the Port Authority's 2019 budget) of operating, maintaining and improving the PATH system.⁴

This would indicate PATH, by moving approximately 300,000 every weekday, provides a value at least equivalent to its cost and potentially more when wider economic benefits are also included. Most of that value won't appear in financial calculations. But, as hard as it is to measure, it can't be ignored when evaluating a transit system's net worth.

³ <https://www.hud.gov/programdescription/mta>

⁴ PATH financial information is found in the budget's projected free cash flows, which account for operating revenue, operational expenses, capital spending and reimbursements. The free cash flow statement and broader budget can be found on the Port Authority's website.



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