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Vehicle Miles Traveled ... revisited

Over the years the Economics Unit of the Port Authority has reported on trends in automobile traffic nationally and regionally. Many of our readers may recall that auto traffic declined at our Trans-Hudson facilities for eight consecutive years, roughly mirroring national trends in vehicle miles traveled (VMT). The last two years however have experienced strong increases in auto trips, returning this part of PA operations back to a growth business. Nevertheless, much uncertainty around the long-term viability and sustainability of auto traffic remains; for instance, the question of the impact of autonomous vehicles is only one concern for transportation agencies such as the Port Authority. We have continuously provided forecasts for auto traffic and, as of now, forecasts suggest modest growth at rates roughly in line with the long term average.

What are the factors that determine auto traffic over time? On the one hand, the current position of the economy in the business cycle greatly affects the extent to which travelers use cars for their commuting and recreational trips.

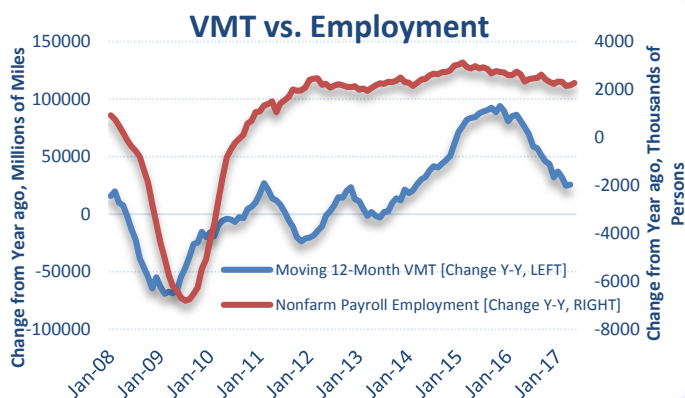


Figure 1 above shows the relationship between the 12-month moving average VMT [tracking left, in year-over-year change] and non-farm employment [tracking right, in year-over-year change]. The graph shows that especially during recessions such as the 2008/2009 financial crisis traffic can be somewhat of a leading indicator. During periods of economic expansion such as between 2009 and today, the change in traffic roughly tracked employment growth overall. It took until early 2010 for the year-over-year change in employment growth to return into positive territory while VMT year-over-year changes did not stay consistently positive until the middle of 2013. Other factors therefore may affect traffic growth even when the economy overall has already returned to a positive growth trajectory.

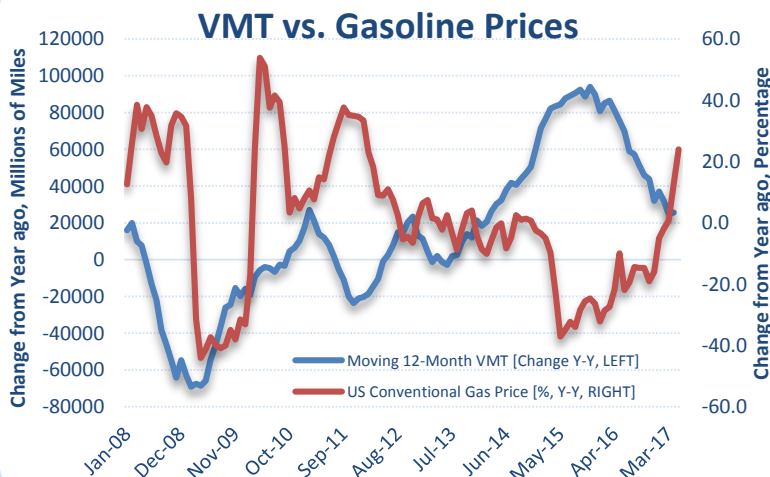
One of the factors that can affect traffic growth is the level and change in gasoline prices. Figure 2 illustrates the same year-over-year changes in VMT but now correlates them to changes in gasoline prices over the last decade. Ignoring the boom and bust cycle in energy markets in 2008 and 2009, gasoline prices experienced negative growth for most of the period between 2010 and 2017.

THE WATCHLIST

Economic Variables	Current	One Year Trend
UNITED STATES		
Real GDP [Annual Rate]	Q1 2017	1.4%
Unemployment Rate	May-17	4.3%
Consumer Price Index [Annual]	May-17	1.9%
Gasoline Price [Regular]	Jun-17	\$2.35
PORT AUTHORITY REGION		
Regional Employment [NY MSA]	May-17	9,637
Consumer Price Index [Annual]	May-17	1.8%
Port District Exports [\$Bill]	Apr-17	\$10.60
Port District Imports [\$Bill]	Apr-17	\$21.27
Case-Shiller Home Price Index	Apr-17	3.8%
Commercial Real Estate Asking Rent		
Midtown	Q1 2017	\$84.64
Downtown	Q1 2017	\$61.28

Roughly, one can identify periods during which there has been an inverse relationship between VMT and gasoline prices such as May 2010 through October 2015. Gasoline prices experienced a massive decline in the middle of 2015, and at approximately the same time, nationwide VMT showed significant positive growth. When gasoline prices started to stop declining and start growing again at the end of 2016, the rate of traffic growth also started to slow; again, illustrating an inverse relationship.

Now, gasoline price changes are not the only factor that affect driving. There are many other influences such as real income growth, the reliability and price of transportation infrastructure, land use and development patterns, and personal preferences by the traveling public. And we have been considering many of these variables in the conceptual design of econometric traffic models. One question that has frequently been asked is the linkage between auto traffic and transit usage in the Trans-Hudson market. While we have generally found low cross-elasticities between these two markets, transit ridership trends on PATH nevertheless require some scrutiny. We will explore this further in a future edition.



MONTHLY ECONOMIC INDICATORS

Planning and Regional Development Department

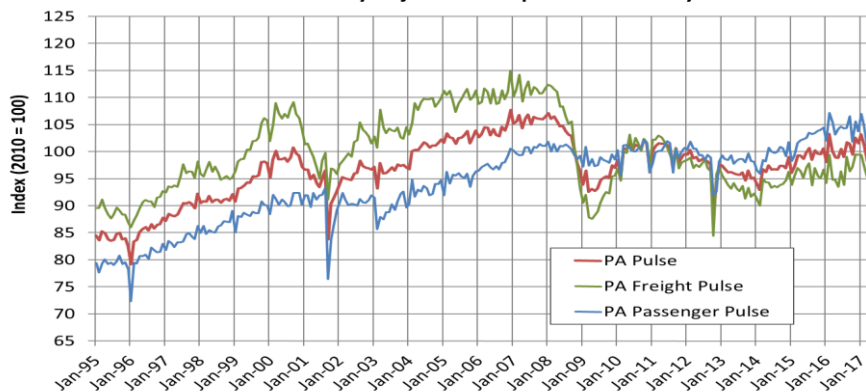
THE PORT AUTHORITY OF NY & NJ

June 2017

AVIATION	Apr '17	YTD	Apr '17/16	YTD '17/16	PORT COMMERCE	Apr '17	YTD	Apr '17/16	YTD '17/16
Revenue Passengers (000's)	11,149.8	40,239.1	5.5%	2.7%	Port Trade				
John F. Kennedy International Airport (JFK)	5,038.1	17,954.4	6.3%	1.8%	Container Imports (TEUs)	278,868	1,052,256	14.0%	4.8%
LaGuardia Airport (LGA)	2,468.2	8,820.4	0.6%	-2.0%	Container Exports (TEUs)	119,415	451,115	4.0%	1.2%
Newark Liberty International Airport (EWR)	3,620.2	13,375.5	7.8%	8.4%	Containers lifted on/off Express Rail	47,043	178,543	4.6%	2.5%
Stewart International Airport (SWF)	23.3	88.8	5.7%	4.1%	TUNNELS, BRIDGES & TERMINALS	Apr '17	YTD	Apr '17/16	YTD '17/16
Revenue Freight (Short Tons)	178,499	688,334	4.8%	5.3%	Eastbound Vehicle Volumes (000's)	9,964	36,949	2.0%	0.0%
Domestic	60,955	241,836	-0.8%	4.5%	George Washington Bridge	4,319	15,968	2.5%	0.1%
International	117,544	446,498	8.0%	5.8%	Lincoln Tunnel	1,608	6,024	0.2%	-1.3%
Flights	107,562	407,534	0.3%	-1.3%	Holland Tunnel	1,233	4,688	-4.4%	-4.3%
Domestic Air Carrier	76,844	294,607	-0.6%	-1.6%	Bayonne Bridge	194	626	51.3%	18.7%
International Air Carrier	25,032	92,423	3.0%	-1.1%	Goethals Bridge	1,309	4,876	1.2%	1.0%
General Aviation	5,686	20,504	0.8%	3.5%	Outerbridge Crossing	1,301	4,767	4.9%	2.7%
Paid Parked Cars	579,179	2,172,249	-13.5%	-13.6%	Eastbound Volumes by Vehicle Type (000's)				
Revenue AirTrain Passengers	816,612	3,047,041	2.0%	3.9%	Autos	9,143	33,727	2.5%	0.2%
					Trucks	580	2,295	-4.3%	-1.8%
					Buses	240	924	-3.0%	-2.3%
FERRY OPERATIONS	Apr '17	YTD	Apr '17/16	YTD '17/16	PORT AUTHORITY PULSE	Apr '17	Mar '17	Change	
Passengers (000's)					(Seasonally Adjusted, 2010=100)				
New Jersey Ferries	743.5	2,596.3	5.4%	-1.4%	PA Pulse (Transportation Activity Index)	100.7	98.2	2.5%	
					PA Freight Pulse	97.1	95.3	1.9%	
					PA Passenger Pulse	104.2	101.1	3.1%	
PATH	Apr '17	YTD	Apr '17/16	YTD '17/16	U.S. TRANSPORT. SERVICES INDEX	Apr '17	Mar '17	Change	
Passengers (000's)	6,866.0	26,005.0	3.8%	2.9%	(Prelim., Seasonally Adj., 2000=100)				
Average Weekday	289.4	1,089.2	7.1%	4.2%	TSI - Combined Index	123.5	123.8	-0.2%	
Average Saturday	121.9	436.7	3.7%	2.2%	TSI - Freight	122.8	123.5	-0.6%	
Average Sunday	94.0	330.4	6.5%	4.6%	TSI - Passenger	124.6	124.2	0.3%	

TRANSPORTATION FOCUS

The PA Pulse - A Seasonally Adjusted Transportation Activity Indicator



PA Pulse Values for April 2017

	Index Value	Change vs. Previous Month	Change vs. Previous Year
PA Pulse	100.7	↑ 2.5%	↑ 1.7%
PA Freight Pulse	97.1	↑ 1.9%	↑ 2.4%
PA Passenger Pulse	104.2	↑ 3.1%	↑ 1.1%

Index is Seasonally Adjusted, 2010=100

Last Updated: June 2017

The agency's multi-model transportation indicator, the PA Pulse (right, in red), suggests more and more people and products are moving through the region. The Pulse's passenger component (in blue) reflects this trend: from January through April, passenger activity was holding at the same level as the same four months last year, and those four months had reflected a spike in activity (a 4 percent increase from the same time in 2015). And freight activity (in green) from January through April this year was 1.6 percent higher than the same window of time last year. The Pulse's freight component does, however, remain well below pre-recession levels.

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