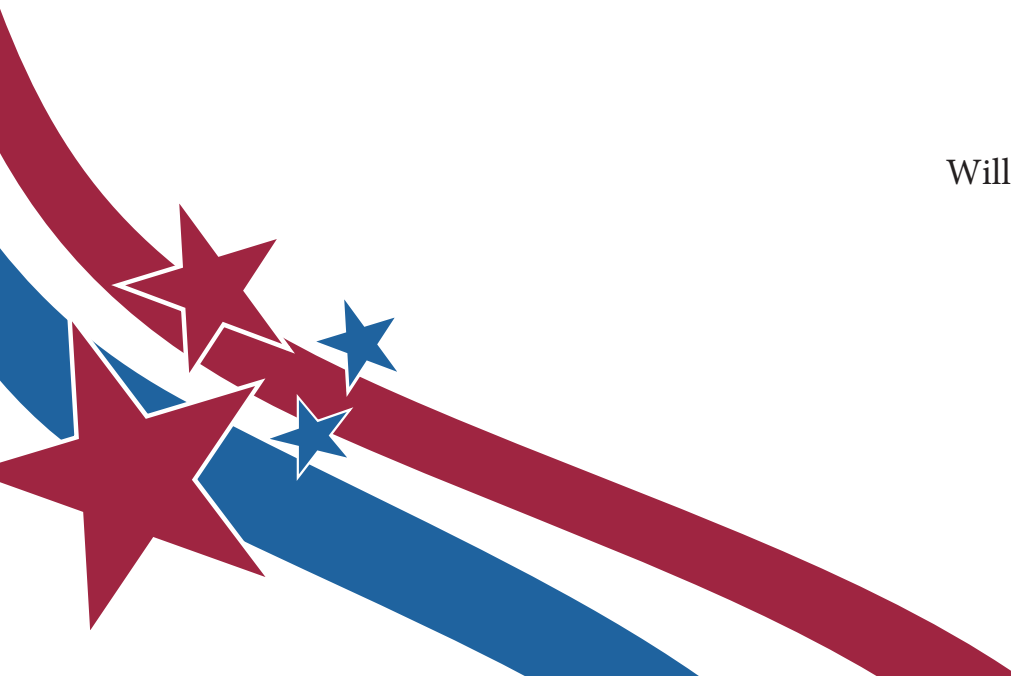


*Socioeconomic Impacts of
COVID-19 on Issues Related
to Motor Vehicle Traffic in
New Jersey*

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Introduction

On March 9, 2020, Governor Phil Murphy declared a state of emergency in response to the growing number of COVID-19 cases in Bergen County, New Jersey (NJ.gov). Restrictions were placed on local businesses, construction projects, school districts, and more as state officials attempted to slow the spread of the virus and keep New Jersey residents safe during this time. This study aims to measure some of the financial and social impacts of the state's temporary lockdown. Each state in the United States has a variety of government-funded highways, roads, and bridges that are maintained by state workers and patrolled by the state police. The upkeep of these public thoroughfares is funded in part by tolls that are paid by drivers using these roads. Under normal circumstances, these highways generate millions of dollars for the state and cause other social and economic impacts. The COVID-19 lockdown has resulted in a variety of economic ramifications for New Jersey residents and taxpayers.

COVID-19 significantly impacted the lives of many Americans, and this research was undertaken to study the effects of the pandemic on issues related to traffic and major highways in New Jersey. The goal of this study was to analyze data from both the Garden State Parkway and N.J. Turnpike and determine whether COVID-19 has affected the state at the economic and social levels. The specific questions that the research focuses on are: How did COVID-19 affect road safety on the N.J. Turnpike and Garden State Parkway? How many fewer vehicles were on major roads during the heavy COVID-19 months and what were the effects of the lower numbers on toll collection revenues? How were gas taxes affected as a result of COVID-19? What was the effect on highway road work production?

COVID-19 and Major Highway Road Traffic

The Garden State Parkway (GSP) and the N.J. Turnpike (NJT) are two of the most heavily traveled highways in the state of New Jersey. According to state records, in 2019 an average of 22.3 million vehicles (passenger and commercial) traveled per month on the New Jersey Turnpike, producing an average monthly toll revenue of \$98 million (NJTA N.J. Turnpike Toll Revenue Comparisons). In 2020, a year in which New Jersey underwent a temporary lockdown and business closures and many residents worked from home, traffic and toll revenue declined significantly from 2019 levels.

Vehicle counts on the NJT declined to an average of 16.6 million vehicles per month, a decline of 25.6% from 2019. NJT toll revenue declined to an average of \$84.6 million, a drop of 13.7%. Drivers on these highways pay different fees according to their vehicle type and destination. The data suggest more commercial vehicles paying higher toll rates continued using the highways than did passenger vehicles. In fact, passenger car toll revenue declined by 22.4% from 2019 to 2020, whereas commercial vehicle toll revenue declined by only 5.9% (NJTA N.J. Turnpike Toll Revenue Comparisons).

On the GSP, an average of 32.2 million passenger and commercial vehicles per month generated \$36.3 million in average monthly tolls in 2019 (NJTA Garden State Parkway Toll Revenue Comparisons). In 2020, the average number of all vehicles on the parkway per month was 25.7 million, a decline of 20.2% from the prior year. GSP average monthly toll revenue declined to \$31 million, down close to 14.5% from 2019. Again, the reduction in travel was seen more significantly among passenger vehicles. Toll revenues from cars declined by 15% from 2019 to 2020 but was only 3.5% less from

commercial vehicles year-to-year (NJTA Garden State Parkway Toll Revenue Comparisons).

In January and February 2020, both highways were already averaging a lesser amount of revenue and lower vehicle counts even before Governor Murphy announced that New Jersey would enter a state of emergency. On the GSP, between March and July, monthly toll revenue fell compared to the collections from the year before. The month with the least amount of revenue was April, in which only \$12.1 million was collected, a 65.94% drop from April 2019. A similar trend for the New Jersey Turnpike was evident in the months of March through August. NJT toll revenue declined by 75% from April 2019 to April 2020.

Transportation leaders at the Alliance of Action State Transportation recognized this decrease in drivers on these highways and decided to use it as a means to put emphasis on construction projects on the streets to help stimulate the state economy. (Less traffic means New Jersey highways are getting paved sooner, 2020). At the worst points of COVID-19, traffic on major highways was reduced to about 50% to 60% of normal volume, but this organization used this circumstance as a platform to use the summer of 2020 as a highway recovery year for New Jersey.

Comparing the toll revenues and transaction data for passenger and commercial vehicles shows that while both significantly declined, the trend was much stronger for passenger vehicles. Eight to nine projects at the time of this writing were in the process of being finished months ahead of their scheduled finish date because of the decisions made to use the time for a focus on construction while traffic was reduced. Atlantic City Expressway officials began a series of projects as well during the same time and

turnpike officials have suggested an increase in potential jobs going forward for roadwork on that sector. Into mid-2022, \$500 million is expected to be put into the Parkway and Turnpike bridges. A toll increase that took effect on September 13, 2020 has resulted in a 10-year capital plan that will result in about 100 different projects for New Jersey roads. (Less traffic means N.J. highways are getting paved sooner, 2020).

COVID-19 and Gas Tax Revenue

The New Jersey state expenditure report notes that “a tax on motor fuels is applied to gasoline, diesel fuel and liquefied petroleum gas used in motor vehicles on public highways” (Office of Revenue and Economic Analysis). With the exception of a few entities that file for exemptions, such as ambulances, exported fuels, and agricultural tractors, the N.J. state government collects tax revenues at a predetermined level. The motor tax for general motor fuels is 10.5 cents per gallon, and there is a 5.25 cents per gallon tax on any units of petroleum gas for the purpose of propelling motor vehicles on public highways. Diesel fuel is taxed at an increased rate of 13.5 cents per gallon (Office of Revenue and Economic Analysis). These rates are charged on top of a Petroleum Products Gross Receipts tax rate of 44.2 cents per gallon for diesel fuel and 40.2 cents for gasoline.

The diminished road traffic caused by COVID-19 and the government shutdown had a negative effect on New Jersey’s gas tax revenue. Research in this area was focused on the months of March through July of 2020 and based on the state of New Jersey’s monthly year-to-year comparisons of revenue collections. Whereas collections rose by 16.17% from March 2019 to March 2020, gas tax revenues declined by double-digit

Table 1

Gas Tax Revenue Comparisons (2019 and 2020)**Dollar amounts are in the thousands (000s)**

Month	2019	2020	Difference in Revenue	Percent Change
March	\$36,961.00	\$42,936.00	\$5,975.00	16.17%
April	\$44,029.00	\$33,845.00	-\$10,184.00	-23.13%
May	\$36,819.00	\$15,185.00	-\$21,634.00	-58.76%
June	\$44,361.00	\$30,974.00	-\$13,387.00	-30.18%
July	\$41,947.00	\$34,393.00	-\$7,554.00	-18.01%

percentages in each of the next four months. In May 2020, revenues came in at \$21.6 million less than one year prior, a decrease of 58.76%. For April through July 2020, gas tax revenues were down by \$52.76 million compared to the same months in 2019. See Table 1 for tax revenues recorded for these months. Between the months of March and May 2020, New Jersey suffered decreases of 38.7% and 16.5% for gasoline and diesel consumption. State officials were concerned regarding the tax revenue losses and responded by increasing the tax amount by 9 cents to 50.5 cents per gallon. This

was enacted in order to meet the target goals for the year. A large portion of the money collected by this particular tax is dedicated to transportation, a discussed item in the New Jersey Constitution. On November 8, 2016, New Jersey voters were asked to vote in regard to an All-Gas Tax Revenue to Transportation Amendment (Ballotpedia). As the second public question, voters were asked to vote either yes or no regarding the dedication of gas taxes to fund transportation projects. A total of 1,660,021 voters (54.51%) of voters elected to use the funds for such purposes. A constitutional amendment was thereby established to start supporting the Transportation Trust Fund by these means. Prior to this change, only 10.5 cents per gallon were required to be deposited into the fund (Ballotpedia). Following this, an increase of 23 cents along with the initial 10.5 cents would go directly to this fund.

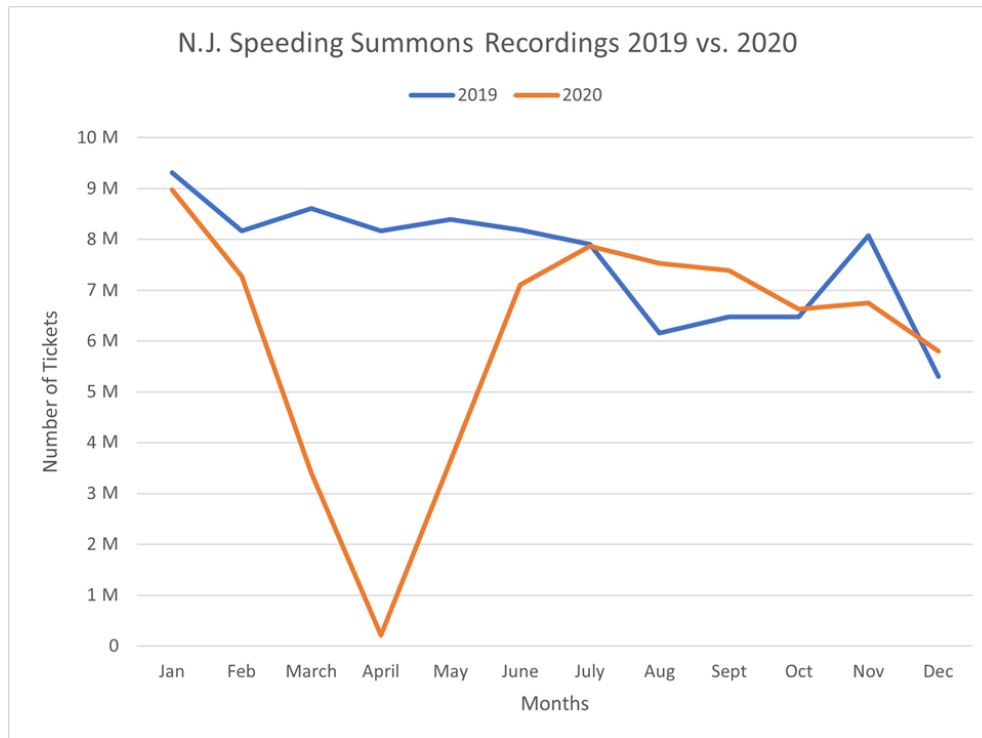
According to its website, The New Jersey Transportation Trust Fund Authority is an independent agency of the New Jersey state government whose stated mission is to finance the cost of "planning, acquisition, engineering, construction, reconstruction, repair, and rehabilitation of the state's transportation system" (NJ Transportation Fund Authority). A revised revenue stream was dedicated for the Transportation Trust Fund (TTF) under a 2016 law signed by Chris Christie. This fund allows for \$16 billion over the course of nearly a decade in order to finance projects on state highways. About \$440 million is annually generated to this fund via motor fuels tax revenue. Times of uncertainty such as COVID-19 required state officials to make the most efficient adjustments for New Jersey's economy.

Speeding Summons Recordings

Speeding is one of the many reasons why a ticket may be issued to a New Jersey driver. A typical traffic ticket consists of three parts: fines, costs, and assessments (Oakland Press). Fines are described as the specific violation for the ticket, costs include built-in charges such as court costs, and assessments refer to any additional charges to provide funding for specific programs. These funds collectively provide funding for local facilities such as public libraries, justice system funds, law enforcement agencies, and local units of government (Oakland Press). A total of 91,215 speeding tickets were issued during 2019. A speeding ticket in New Jersey costs between \$85 and \$260 depending on how far over the speed limit one was driving (Improv). If each ticket were written for its minimal amount of \$85, the state would collect approximately \$7.75 million. If a median cost of \$172.50 in that range were collected, revenues would equal about \$15.7 million. These projections provide a rough estimate of how much money the state generates through speeding tickets.

Similar to gas tax revenue and toll revenues, speeding tickets experienced a large decline during the government shutdown. Between the months of March and April 2020, the number of issued tickets was significantly lower than the same month during the year prior. The largest decrease from year to year was a drop from 8,170 tickets to only 211 tickets issued in one month, which took place in April. This 97.42% drop resulted in a minimum potential loss of about \$676,515 in April 2020 alone. Between March and July 2020, 19,028 fewer tickets were issued compared to the year prior. Figure 1 illustrates these trends.

Fig.1



Motor Vehicles Fatalities in NJ

Although fewer cars were on the main highways during the months of the shutdown, a number of drivers were killed in car accidents. Officials announced in February 2019 that irresponsible driving led to an increase of 5% in fatal crashes across New Jersey compared to the prior year (Daily Voice). The trend for fatalities can also be seen on a national level, leading to an increase of 30% despite having significantly fewer drivers on the roads (Daily Voice). This trend has concerned many individuals and the state of Division of Highway Traffic Safety has launched several social media campaigns and other awareness tools to bring attention to the issue of reckless driving. Pam Shadel, a Governor's Safety Association senior director, reported in an interview in May 2020 that law enforcement has reported many cases of heavy speeding across New

Jersey with speeds of 20-40 miles per hour over the posted speeding limit. She suggested that COVID-19 has caused a diversion in the law enforcement system and that it has imposed a danger on New Jersey drivers. One report from Col. Patrick Callahan describes a driver going 100 miles per hour on I-80. A 62% drop in highway traffic combined with laxer enforcement of speeding regulations has resulted in an increase in motor vehicle fatalities in 2020 during the months of March through August (Have deserted N.J. highways from coronavirus lockdowns led to extreme speeding?, 2020).

Conclusion

Reductions in highway traffic, gas tax revenue, and an increase in speeding citations across New Jersey have brought a variety of hardships during the year 2020. The arrival of COVID-19 was very sudden and demanded a series of aggressive steps from government officials such as Governor Phil Murphy. The shutdown that took place largely during the months of March through August reduced funds for New Jersey's main highways and their upkeep as well as gas tax revenue funds that contribute to supporting buildings such as public libraries. Additionally, there was less money generated from speeding summonses due to laxer traffic policing, and reports show cases of extreme speeding and increased fatality rates. One positive outcome of COVID-19 was an increase in road work production and an expansion of projects for the coming years through a revenue plan.

Recognizing the hardship New Jersey has faced as a result of this difficult time is important for New Jersey taxpayers in the upcoming year. The national economy has struggled over the last year, and many have wondered what solutions officials could come up with to

resolve its large deficits even before COVID-19. There are needs to fix potholes and sustain New Jersey roads in different ways, but COVID-19 has introduced complications to how an already struggling economy will continue to find solutions to pay for their needs.

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