

# Measuring the impact of suspended licenses on state tax revenue



Analysis prepared for Alabama Appleseed

by

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## Introduction

In Alabama, residents can have their driver's licenses suspended for failing to pay fines, fees, or courts costs. The median amount the state expects to collect from a driver with a suspended license is \$869.<sup>1</sup> The state faces a tradeoff, however, in collecting the fines, fees, or court costs versus tax revenue the state would have generated if the resident were still able to legally drive. At minimum, the state forgoes revenue from gasoline taxes the driver would have paid, but license suspensions create hardships that often lead to job loss, thereby creating additional income tax revenue losses or the state.

For this analysis, I focus on the tax revenue losses incurred by Alabama through its policy to suspend driver's licenses for failing to pay fines, fees, or court costs. In the next section, I outline the methodological approach and provide the rationale for certain estimates. Then, I provide a tax revenue loss analysis across multiple scenarios of Alabama driving habits and potential job losses. I include a section that discusses the limitations associated with my analyses.

For each driver's license suspended, the state loses \$140 per year, assuming each resident with a suspended license would have driven 10,000 miles in a 20-mpg car, on average. Previous studies showed the median driver waits over 5 years to have their driver's license reinstated, so the state ultimately forgoes \$700 in gasoline tax revenue per resident with a license suspended. Assuming the median resident with a suspended driver's license earns 150 percent of the poverty level (\$19,320), the state loses \$198.36 per year for each driver's license suspended, on average. Over a five-year period, this amounts to \$973.86 in forgone income tax revenue, on average.<sup>2</sup>

Combined, the income and gas tax revenue that would have been collected by the state almost exceeds twice the median amount owed by the resident with a suspended driver's license. **Stated another way, even after the state collects the fines and fees owed by the median resident with a suspended license, it has still lost \$804.86 in tax revenue.**

The revenue losses provided are likely underestimates, as I do not consider drops in other tax revenue sources associated with someone's inability to drive and job loss. For example, residents with a suspended license likely consume less in taxable goods and services, thereby reducing the amount in sales and excise taxes the state would receive. I also do not measure the increase in expenditures the state incurs through driver license suspension, including the increase in unemployment benefit payments to individuals who lose their job as a result of having their license suspended for nonpayment (or increases in Medicaid because an individual loses employer-sponsored healthcare). This analysis also doesn't consider the costs associated with attempting to collect fines, fees, or court costs.

Absent, too, from this analysis is also the economic impact on the state's GDP. The job losses and resulting decreases in vehicle use likely have a dampening effect on the local and state economy. Finally, I also do not estimate longer-term, dynamic effects on tax revenue and economic growth. Economists have estimated that job loss reduces lifetime earnings by 8 to 9 percent,<sup>3</sup> which can equate to losing about 1.4 years of pre-displacement earnings.<sup>4</sup>

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<sup>1</sup> <https://www.alabamaappleseed.org/wp-content/uploads/2020/02/Alabama-Appleseed-Stalled-Brief-1.pdf>

<sup>2</sup> The five-year period estimates do not equal five times the one-year estimates because I assume different re-employment rates. With the one-year estimates, I assume a proportion of residents that lose their jobs because of a suspended driver's license become re-employed at 3 or 9 months after becoming unemployed. With the five-year estimates, I assume a proportion drivers become re-employed 1- and 3-years after becoming unemployed.

<sup>3</sup> <https://academic.oup.com/restud/article/87/4/1757/5814934>

<sup>4</sup> [https://www.brookings.edu/wp-content/uploads/2011/09/2011b\\_bpea\\_davis.pdf](https://www.brookings.edu/wp-content/uploads/2011/09/2011b_bpea_davis.pdf)

## Methodology

Based on estimates provided by ALEA, 22,735 Alabama residents had their licenses suspended for failure to pay (FTP) and 80,593 were suspended for failure to appear (FTA) as of April 20, 2018. For this analysis, I estimate the average amount of tax revenue lost by the state for each driver's license suspended.

**Duration of tax revenue loss:** ALEA did not provide data on the length of time a resident takes to pay off their fines and have their license reinstated, so I estimate revenue losses for one and five years for a robust confidence interval. The true revenue losses likely exceed the upper limit of this interval, however, given evidence from a North Carolina study showed the median length of time a driver's license was revoked for nonpayment of traffic tickets was 5.82 years, with many residents losing their licenses for decades.<sup>5</sup>

**Attributes of drivers:** I also did not have income or demographic data on Alabamians with suspended licenses. Based on data from New Jersey, 63.2 percent of drivers with a suspended license lived in an urban area, compared to 24.5 percent in suburban areas and 11.7 percent in rural areas. Compared to all licensed drivers, residents with suspended driver's licenses were more likely to live in urban areas and in middle-income or low-income zip code areas.

**Gas tax revenue assumptions:** The average Alabamian drives 12,000 to 15,000 miles per year.<sup>6</sup> Drivers in urban areas drive fewer miles than those in suburban and rural areas,<sup>7</sup> so I provide estimates ranging from 8,000 to 10,000 miles for urban drivers. I also include estimates for suburban and rural drivers that range from 12,000 to 15,000 miles. Recent EPA data shows the average fuel economy of new light-duty vehicles over the last two decades ranged from 20 to 25 miles per gallon (mpg). Given many residents with suspended licenses likely live in lower-income areas, it is less likely they drive newer cars or are able to maintain older cars in a way that preserves higher gas mileage, so I also include 15 mpg among my estimates. Finally, the state's share of the gasoline tax rate is \$0.28 per gallon.

**Income tax revenue assumptions:** Job loss commonly occurs with the suspension of a license since approximately 85 percent of people in US drive to work,<sup>8</sup> and "only 30% of jobs – and 25% of low- and middle-skill industry jobs – are accessible by public transit within 90 minutes."<sup>9</sup> In New Jersey, 42 percent of people who lost their license also lost their jobs as a result.<sup>10</sup> Of those that lost their job, 45 percent never found another job, and that vast majority of those that did find a job earned a lower wage.<sup>11</sup> Those estimates were based on a survey of 383 drivers, so I use a 95 percent confidence interval of 42 percent  $\pm$  6 percent to generate scenarios where unemployment ranges from 36 percent to 48 percents.<sup>12</sup>

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<sup>5</sup> [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3440832](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3440832)

<sup>6</sup> <https://www.al.com/news/2021/06/alabamians-are-back-on-the-road-averaging-more-miles-per-day-than-before-lockdown.html>; <https://www.carinsurance.com/Articles/average-miles-driven-per-year-by-state.aspx>

<sup>7</sup> <https://www.bts.gov/statistical-products/surveys/vehicle-miles-traveled-and-vehicle-trips-state>

<sup>8</sup> <https://www.census.gov/content/dam/Census/library/publications/2015/acs/acs-32.pdf>

<sup>9</sup> <https://www.brookings.edu/research/missed-opportunity-transit-and-jobs-in-metropolitan-america/>

<sup>10</sup> <https://www.njcourts.gov/courts/assets/supreme/reports/2018/sccmcoreport.pdf>

<sup>11</sup> [https://www.state.nj.us/mvc/pdf/about/AFTF\\_final\\_02.pdf](https://www.state.nj.us/mvc/pdf/about/AFTF_final_02.pdf)

<sup>12</sup> <https://www.politico.com/states/f/?id=00000174-fabc-d951-a77f-fbfedef80000>

## Analysis

Gas tax revenue: Table 1 displays the gasoline tax revenue lost when a resident has their license suspended for one year. Values were derived by dividing total miles driven by mpg and then multiplying by the state's share of the gasoline tax (\$0.28). Again, previous evidence suggests the median driver has their license reinstated after 5.82 years, so the 5-year estimates likely reflect the true revenue loss per driver.

Table 1: Reduction in gasoline tax revenue per driver

		<i>15 mpg car</i>	<i>20 mpg car</i>	<i>25 mpg car</i>
1-year estimate	8,000 miles	\$149	\$112	\$90
	10,000 miles	\$187	\$140	\$112
	12,000 miles	\$224	\$168	\$134
	15,000 miles	\$280	\$210	\$168
5-year estimate	8,000 miles	\$747	\$560	\$448
	10,000 miles	\$933	\$700	\$560
	12,000 miles	\$1,120	\$840	\$672
	15,000 miles	\$1,400	\$1,050	\$840

Income tax revenue: I estimate the income tax revenue loss across the three potential outcomes for those who have their license suspended: remain employed, become unemployed but find a job after a period of time, and become unemployed and remain unemployed. Table 2 shows the estimates of the proportions of individuals who would be in each group, given a 36 percent, 42 percent, and 48 percent unemployment rate among Alabamians with suspended driver's licenses.

Table 2: Proportions of suspended drivers across employment outcomes

Unemployment rate	<i>Remain employed</i>	<i>Become unemployed but find another job</i>	<i>Become unemployed and remain unemployed</i>
36%	64%	36% x 55% = 19.8%	36% x 45% = 16.2%
42%	58%	42% x 55% = 23.1%	42% x 45% = 18.9%
48%	52%	48% x 55% = 26.4%	48% x 45% = 21.6%

To compute the average income tax revenue lost from residents with a suspended driver's license, I multiply the proportion of drivers within each outcome presented in Table 2 by the income tax revenue loss for each outcome. For those that remain employed, the income tax revenue loss would be \$0. For those that lose their job, the loss would be equal to the income tax they would have paid, given their income at their previous employment, multiplied by the duration of time they were unemployed. For example, if a person making \$25,000 per year were to lose their job for one year, the state would forgo \$945.25 in income tax revenue.

Table 3 presents the 1-year income tax revenue estimates and Table 4 presents 5-year estimates. With each set of estimates, I provide revenue losses assuming the average driver has an income ranging in \$5,000 increments from \$15,000 to \$35,000. I also include estimate for persons who earn 150 percent of the federal poverty level (\$19,320) and the median income in Alabama (\$27,928).

Table 3: One-year estimates of average income tax revenue loss per resident with suspended driver's license

Income	Unemployment rate	Of those who become unemployed				Range	
		45% stay unemployed	55% re-employed after			Lower	Upper
			3 months	6 months	9 months		
\$15,000	36%	\$80.64	\$63.86	\$26.73	\$0.00	\$80.64	\$144.49
	42%	\$94.07	\$74.50	\$31.19	\$0.00	\$94.07	\$168.57
	48%	\$107.51	\$85.14	\$35.64	\$0.00	\$107.51	\$192.65
\$19,320	36%	\$112.13	\$94.01	\$48.11	\$21.78	\$133.91	\$206.14
	42%	\$130.82	\$109.68	\$56.13	\$25.41	\$156.23	\$240.50
	48%	\$149.50	\$125.35	\$64.15	\$29.04	\$178.54	\$274.85
\$20,000	36%	\$117.09	\$98.55	\$143.00	\$21.78	\$138.87	\$215.64
	42%	\$136.60	\$114.98	\$143.00	\$25.41	\$162.01	\$251.58
	48%	\$156.11	\$131.41	\$143.00	\$29.04	\$185.15	\$287.52
\$25,000	36%	\$153.13	\$131.97	\$76.23	\$21.78	\$174.91	\$285.10
	42%	\$178.65	\$153.96	\$88.94	\$25.41	\$204.06	\$332.61
	48%	\$204.17	\$274.20	\$101.64	\$29.04	\$233.21	\$478.37
\$27,928	36%	\$174.00	\$151.53	\$89.33	\$21.78	\$195.78	\$325.53
	42%	\$203.00	\$176.78	\$104.22	\$25.41	\$228.41	\$379.79
	48%	\$232.01	\$202.04	\$119.10	\$29.04	\$261.05	\$434.04
\$30,000	36%	\$188.77	\$165.37	\$98.55	\$26.73	\$215.50	\$354.14
	42%	\$220.23	\$192.93	\$114.98	\$31.19	\$251.42	\$413.16
	48%	\$251.69	\$220.49	\$131.41	\$35.64	\$287.33	\$472.19
\$35,000	36%	\$224.41	\$197.84	\$120.83	\$39.11	\$263.52	\$422.25
	42%	\$261.81	\$230.82	\$140.97	\$45.62	\$307.43	\$492.63
	48%	\$299.21	\$263.79	\$161.11	\$52.14	\$351.35	\$563.00

\*\$19,320 is 150% of the federal poverty level for a single person in Alabama

\*\*\$27,928 is the median income for a single person in Alabama

\*\*\*Estimates in the range columns may be off by one decimal due to rounding.

Table 4: Five-year estimates of average income tax revenue loss per resident with suspended driver's license

		Of those who become unemployed			Range	
Income	Unemployment rate	45% stay unemployed	55% re-employed after		Lower	Upper
		Never	1 year	3 years		
\$15,000	36%	\$403.18	\$98.55	\$295.66	\$501.73	\$698.84
	42%	\$470.37	\$114.98	\$344.94	\$585.35	\$815.31
	48%	\$537.57	\$131.41	\$394.22	\$668.98	\$931.79
\$19,320	36%	\$560.64	\$137.05	\$411.14	\$697.69	\$971.78
	42%	\$654.08	\$159.89	\$479.66	\$813.97	\$1,133.74
	48%	\$747.52	\$182.73	\$548.18	\$930.25	\$1,295.70
\$20,000	36%	\$585.43	\$143.10	\$429.31	\$728.53	\$1,014.74
	42%	\$683.00	\$166.96	\$500.87	\$849.95	\$1,183.86
	48%	\$780.57	\$190.81	\$572.42	\$971.38	\$1,352.99
\$25,000	36%	\$765.65	\$187.16	\$561.48	\$952.81	\$1,327.13
	42%	\$893.26	\$218.35	\$655.06	\$1,111.61	\$1,548.32
	48%	\$1,020.87	\$249.55	\$748.64	\$1,270.42	\$1,769.51
\$27,928	36%	\$870.02	\$212.67	\$638.02	\$1,082.69	\$1,508.04
	42%	\$1,015.02	\$248.12	\$744.35	\$1,263.14	\$1,759.38
	48%	\$1,160.03	\$283.56	\$850.69	\$1,443.59	\$2,010.72
\$30,000	36%	\$943.85	\$230.72	\$692.16	\$1,174.57	\$1,636.01
	42%	\$1,101.16	\$269.17	\$807.52	\$1,370.33	\$1,908.68
	48%	\$1,258.47	\$307.63	\$922.88	\$1,566.10	\$2,181.35
\$35,000	36%	\$1,122.05	\$274.28	\$822.84	\$1,396.33	\$1,944.89
	42%	\$1,309.06	\$319.99	\$959.98	\$1,629.05	\$2,269.04
	48%	\$1,496.07	\$365.71	\$1,097.12	\$1,861.78	\$2,593.19

\*\$19,320 is 150% of the federal poverty level

\*\*\$27,928 is the median income for a single person in Alabama

\*\*\*Estimates may be off by one decimal due to rounding.

For one-year estimates, I generate the lower estimate by adding the revenue lost from drivers who never become re-employed with drivers who become re-employed after 3 months. For the upper bound estimate, I add the revenue lost from drivers who never become re-employed with drivers who become re-employed after 9 months. The income tax revenue lost per suspended driver ranged from \$80.64 to \$563.00 in one year. Lower-end estimates assumed suspended drivers earned less per year and quickly found re-employment whereas higher-end estimates assumed suspended drivers earned more per year and found re-employment more slowly.

If the unemployment rate due to driver's license suspensions was consistent with previous research, the state would lose \$156.23 to \$240.507 per year for every driver's license suspended, assuming residents whose licenses were suspended earned 150 percent of the poverty level, on average.

With the five-year estimates, I follow the same process for generating lower and upper bounds for the range of income tax revenue loss. For the lower bound, I add the revenue lost from drivers who never become re-employed with drivers who become re-employed after one year, and I estimate the upper bound as the sum of revenue lost from drivers who stay unemployed with drivers who find a job after 3 years. The five-year period estimates do not equal five times the one-year estimates because I assume these different re-employment rates.

If the unemployment rate due to driver's license suspensions was consistent with previous research, the state would lose \$813.97 to \$1,133.74 per year for every driver's license suspended, assuming residents whose licenses were suspended earned 150 percent of the poverty level, on average.

## Limitations

The lack of income and demographic data for residents who have had their license suspended made precise estimates difficult to make. Likewise, previous research on license suspensions was limited. However, the data from New Jersey and North Carolina provide for an adequate basis for my estimates since Alabama and New Jersey have similar rates of FTP and FTA suspensions,<sup>13</sup> and Alabama shares many demographic and geographic similarities with North Carolina.

Nevertheless, the lack of precise data on job losses and driving habits limited how precise I could be with the estimates, especially when my assumptions interacted. For example, I assume consistent rates of unemployment (36, 42, and 48 percent) across income ranges, but a person earning \$35,000 per year has a different likelihood of unemployment and re-employment than someone making \$20,000. Likewise, a person earning \$35,000 per year likely has different driving habits and type of car (with different mpg) than someone who earns \$20,000 per year.

While these are important factors, the true total tax revenue losses are unlikely to be different from the estimates I have presented. If, for example, the average resident earns less in income than what has been estimated, it is likely the case they drive an older vehicle with worse fuel efficiency. In this case, the income tax losses would have been overestimated but the gas tax losses would be underestimated, thereby offsetting one another.

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<sup>13</sup> [https://www.state.nj.us/mvc/pdf/about/AFTF\\_final\\_02.pdf](https://www.state.nj.us/mvc/pdf/about/AFTF_final_02.pdf)

Appendix A: State income taxes owed, one-year

<i>Income</i>	<i>Minus standard deduction</i>	<i>Minus state deduction</i>	<i>Minus federal taxes paid</i>	<i>2% tax bracket</i>	<i>4% tax bracket</i>	<i>5% tax bracket</i>	<i>Taxes owed</i>
\$15,000	\$12,500	\$11,000	\$10,755	\$10	\$100	\$387.75	\$497.75
\$19,320	\$16,820	\$15,320	\$677	\$14,643	\$10	\$100	\$582.15
\$20,000	\$17,500	\$16,000	\$15,255	\$10	\$100	\$612.75	\$722.75
\$25,000	\$22,500	\$21,000	\$19,705	\$10	\$100	\$835.25	\$945.25
\$27,928	\$25,428	\$23,928	\$22,282	\$10	\$100	\$964.10	\$1,074.10
\$30,000	\$27,500	\$26,000	\$24,105	\$10	\$100	\$1,055.25	\$1,165.25
\$35,000	\$32,500	\$31,000	\$28,505	\$10	\$100	\$1,275.25	\$1,385.25



Appendix B: State income taxes owed, one-year with job losses

	<i>Income</i>	<i>Income after unemployment</i>	<i>Minus standard deduction</i>	<i>Minus state deduction</i>	<i>Federal taxes paid</i>	<i>Minus federal taxes paid</i>	<i>2% tax bracket</i>	<i>4% tax bracket</i>	<i>5% tax bracket</i>	<i>Taxes owed</i>
<b>3 mos.</b>	\$15,000	\$11,250.00	\$8,750	\$7,250	\$0	\$7,250	\$10	\$100	\$212.50	\$322.50
	<b>\$19,320</b>	<b>\$14,490.00</b>	<b>\$11,990</b>	<b>\$10,490</b>	<b>\$194</b>	<b>\$10,296</b>	<b>\$10</b>	<b>\$100</b>	<b>\$364.80</b>	<b>\$474.80</b>
	\$20,000	\$15,000.00	\$12,500	\$11,000	\$245	\$10,755	\$10	\$100	\$387.75	\$497.75
	\$25,000	\$18,750.00	\$16,250	\$14,750	\$620	\$14,130	\$10	\$100	\$556.50	\$666.50
	<b>\$27,928</b>	<b>\$20,946.00</b>	<b>\$18,446</b>	<b>\$16,946</b>	<b>\$840</b>	<b>\$16,106</b>	<b>\$10</b>	<b>\$100</b>	<b>\$655.30</b>	<b>\$765.30</b>
	\$30,000	\$22,500.00	\$20,000	\$18,500	\$996	\$17,504	\$10	\$100	\$725.20	\$835.20
	\$35,000	\$26,250.00	\$23,750	\$22,250	\$1,466	\$20,784	\$10	\$100	\$889.20	\$999.20
<b>6 mos.</b>	\$15,000	\$7,500.0	\$5,000	\$3,500	\$0	\$3,500	\$10	\$100	\$25.00	\$135.00
	<b>\$19,320</b>	<b>\$9,660.0</b>	<b>\$7,160</b>	<b>\$5,660</b>	<b>\$0</b>	<b>\$5,660</b>	<b>\$10</b>	<b>\$100</b>	<b>\$133.00</b>	<b>\$243.00</b>
	\$20,000	\$10,000.0	\$7,500	\$6,000	\$0	\$6,000	\$10	\$100	\$150.00	\$260.00
	\$25,000	\$12,500.0	\$10,000	\$8,500	\$0	\$8,500	\$10	\$100	\$275.00	\$385.00
	<b>\$27,928</b>	<b>\$13,964.0</b>	<b>\$11,464</b>	<b>\$9,964</b>	<b>\$141</b>	<b>\$9,823</b>	<b>\$10</b>	<b>\$100</b>	<b>\$341.15</b>	<b>\$451.15</b>
	\$30,000	\$15,000.0	\$12,500	\$11,000	\$245	\$10,755	\$10	\$100	\$387.75	\$497.75
	\$35,000	\$17,500.0	\$15,000	\$13,500	\$495	\$13,005	\$10	\$100	\$500.25	\$610.25
<b>9 mos.</b>	\$15,000	\$3,750.00	\$1,250	\$0	\$0	\$0	\$10	\$100	\$0.00	\$0.00
	<b>\$19,320</b>	<b>\$4,830.00</b>	<b>\$2,330</b>	<b>\$830</b>	<b>\$0</b>	<b>\$830</b>	<b>\$10</b>	<b>\$100</b>	<b>\$0.00</b>	<b>\$110.00</b>
	\$20,000	\$5,000.00	\$2,500	\$1,000	\$0	\$1,000	\$10	\$100	\$0.00	\$110.00
	\$25,000	\$6,250.00	\$3,750	\$2,250	\$0	\$2,250	\$10	\$100	\$0.00	\$110.00
	<b>\$27,928</b>	<b>\$6,982.00</b>	<b>\$4,482</b>	<b>\$2,982</b>	<b>\$0</b>	<b>\$2,982</b>	<b>\$10</b>	<b>\$100</b>	<b>\$0.00</b>	<b>\$110.00</b>
	\$30,000	\$7,500.00	\$5,000	\$3,500	\$0	\$3,500	\$10	\$100	\$25.00	\$135.00
	\$35,000	\$8,750.00	\$6,250	\$4,750	\$0	\$4,750	\$10	\$100	\$87.50	\$197.50